

**PART 70 OPERATING PERMIT FACT SHEET
INTERNATIONAL STEEL GROUP
ISG SPARROWS POINT, LLC.
5111 NORTH POINT BOULEVARD,
SPARROWS POINT, MD 21219-1014
PART 70 PERMIT NO. 24-005-00147**

Draft
11-15-2004

BACKGROUND

International Steel Group (ISG) Sparrows Point Inc., formerly known as Bethlehem Steel Sparrows Point Division, is located at 5111 North Point Boulevard in Baltimore County. The plant occupies approximately 2,300 acres of the Sparrows Point Peninsula, which extends into the Patapsco River from its eastern shore in Baltimore County, Maryland.

The facility is an integrated iron and steel complex that has operated at the site since 1889. The complex consists of both raw steel making and finishing operations. The iron and steel manufacturing process occurs in a series of several main steps. Raw materials, such as limestone and iron ores are unloaded at the Ore Yard. Coke and coal are unloaded at their deep water pier near the old blast furnaces, while scrap metal is processed by a third party company located near the Basic Oxygen Furnace shop. The iron ores, fines, and coke breeze are processed through the Sinter plant where they are fused into a high-grade sinter. The high-grade sinter as well as limestone and coke are fed into the top of the Blast Furnace, where hot air and fuel are used to convert the mix into molten iron. The molten iron then proceeds to the Basic Oxygen Furnace, where it is added to scrap metal and oxygen is blown into the mix to produce molten steel. Alloys are added to the molten steel to get the final desired grade of steel before the molten steel is sent to the Continuous Caster.

Depending on the type of finished product, the steel is either shipped offsite or sent to the Hot Strip Mill for further processing. From the Hot Strip Mill the steel is either shipped offsite or sent to the Cold Reduction Mill or Finishing Mills for further processing finishing before being shipped. The Finishing Mills include the four coating lines, chrome plating, and Tin Mill.

The SIC code of the facility is 3312.

The following table summarizes the actual emissions from the ISG facility based on Emissions Certification Reports.

Actual Emissions of Criteria Pollutants

Year	NO _x (TPY)	SO _x (TPY)	PM ₁₀ (TPY)	CO (TPY)	VOC (TPY)	HYDROGEN CYANIDE (TPY)
2003	3371	3748	1482	54169	291	5
2002	3607	4,094	1,691	61,563	309	53
2001	3,609	4,073	1,689	60,172	555	56
2000	3,816	4129	1,819	62,970	871	57
1999	3503	4673	1,599	72,904	304	46

The major source threshold for triggering Title V permitting requirements in Baltimore County is 25 tons

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per year for NO_x, 25 tons per year for VOCs, 10 tons per year for a single Hazardous Air Pollutant (HAP), 25 tons per year or more of any combination of HAPs, and 100 tons per year for any other criteria pollutant. Since the actual emissions for all regulated criteria pollutants are greater than the major source thresholds, ISG is required to obtain a Title V (Part 70 Operating Permit) under COMAR 26.11.03.01.

On December 1, 2001, Maryland's interim approval of its Part 70 program expired. At that time, a federal Part 71 program became effective. EPA Region III delegated implementation of the Part 71 program to the Department. As part of a delegation agreement between Maryland and the EPA, Maryland agreed to require sources that had not been issued a Part 70 permit as of December 1, 2001, to submit a Part 71 application. The Department on May 29, 2002 received the Part 71 permit application for Bethlehem Steel Sparrows Point Division (now ISG Sparrows Point Inc.). An administrative completeness review was conducted and the application was deemed to be administratively complete. The Part 71 permit application will serve as a revised Part 70 permit application for the issuance of this Part 70 permit.

MACT REQUIREMENTS

ISG Sparrows Point Inc. is a major source of hazardous air pollutant (HAP) emissions and is therefore subject to the MACT requirements. Of the various standards established for specific source categories, only two apply to ISG Sparrows Point Inc.

40 CFR 63, Subpart CCC: National Emissions Standards for Steel Pickling – HCL Process Facilities and Hydrochloric Acid Regeneration Plants applies to the new Pickler at the Cold Reduction Mill at ISG. All new and existing steel pickling facilities that pickle carbon steel using hydrochloric acid solution that contains 6 percent or more by weight HCl and is at a temperature of 100 deg.F or higher are subject to the requirements under Subpart CCC. Affected sources at a facility or plant subject to this subpart include continuous and batch pickling lines, hydrochloric acid regeneration plants, and hydrochloric acid storage vessels.

Also, *40 CFR 63, Subpart FFFFF - National Emission Standards for Hazardous Air Pollutants for Integrated Iron and Steel Manufacturing Facilities*, affects each new or existing sinter plant, blast furnace, and basic oxygen process furnace (BOPF) shop at the integrated iron and steel manufacturing facility. Emission limitations have been established for the sinter plant windbox exhaust, discharge end, and sinter cooler; the blast furnace cast house; and the BOPF shop including each furnace and ancillary operations (hot metal transfer, hot metal desulfurization, slag skimming, and ladle metallurgy). EPA published the Final Rule for the Integrated Iron and Steel Manufacturing in the Federal Register on May 20, 2003. Existing affected sources must comply with the MACT requirements by May 22, 2006. The final rule includes particulate matter emission limits for capture and control devices.

EMISSIONS UNIT IDENTIFICATION

The ISG facility comprises of several departments that are further divided into plants or productions lines, each of which may have several emission units. The facility has identified the following department operations and associated emission units at the facility as being subject to the Title V permitting requirements and having applicable requirements.

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Emission Unit Identification

Emissions Unit Name	Emissions Unit Description	Registration Number (Date of Installation)
<u>IRON MAKING DEPARTMENT</u>		
ORE YARD	Ore Yard Material Handling (BFOYMH-F)	6-0940 (1972)
BEDDING PLANT	Bedding Plant Material Handling (BFBPMH-F)	6-0940 (1972)
SINTER PLANT	Burnt Lime Silo, with Baghouse (BFSPBLSB-S)	9-0947 (1976)
	Cold Screening (BFSPCS-F) with Baghouse (BFSPCHSB-S)	6-0941 (1976)
	Cooler (BFSPCO-F) with Multicyclone (BFSPCOM-S)	6-0941 (1976)
	Discharge End Fugitives (BFSPSSDE-F)	
	Hot Screening (BFSPHS-F) with Baghouse (BFSPCHSB-S)	6-0941 (1976)
		6-0941 (1976)
	Sinter Strand with Windbox Cyclones (BFSPC-F)	
	Sinter Strand with Scrubber No 1 (BFSPFC1S-S)	6-0941 (1976)
	Sinter Strand with Scrubber No. 2 (BFSPFC2S-S)	6-0941 (1976)
	Sinter Strand Roof Monitor (BFSPSSRM-F)	6-0941 (1976)
	Water Treatment Lime Silo with Baghouse (BFSPWTLSB-S)	6-0941 (1976)
		6-0941 (1976)
		6-0947 (1976 & 1989)
BLAST FURNACE	B Street East Bleeder (BFBFBSEB-S)	6-0939M (1978/mod. 1999)
	B Street West Bleeder (BFBFBWB-S)	6-0939M (1978/mod. 1999)
	Blast Furnace (BFBFFB-S)	6-0939M (1978/mod. 1999)
	CastHouse baghouse (BFBFCH-F)	6-0939M (1978/mod. 1999)
	Cooling Tower (BFBFCT-F)	6-0939M (1978/mod. 1999)
	Dust Catcher (BFBFFBDC-F)	6-0939M (1978/mod. 1999)
	Emergency Bleeder (BFBFEB-S)	6-0939M (1978/mod. 1999)
	Hot Metal Car Dryout (BFBFHMCD-F)	6-0939M (1978/mod. 1999)
	Slag Pit (BFBFSP-F)	6-0939M (1978/mod. 1999)
	Four Stoves with one Stack (BFBFS1 thru S4)	6-0939M (1978/mod. 1999)
<u>SLAB GROUP</u>		
56" SLAB CONDITIONING	56" Slab Slitting (HSMSS56-F)	6-2207 (1996)
68" SLAB CONDITIONING	68" Slab Slitting (HSMSS68-F)	6-2219 (1996)
Plate Mill Slab Conditioning		6-02760 (11/12/2003)
BEACHING	No. 3 Open Hearth Beach Yard (BLFLBLFHMDPF-F) controlled by CO ₂ blanket.	6-2582M (2000)
BOF SHOP	BOF Charging, Refining, Tapping, Slag Handling (SMBOFBOF-F) with (4) BOF Scrubbers (SMBOFBOFS-	6-0943 (1966)

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Emissions Unit Name	Emissions Unit Description	Registration Number (Date of Installation)
	S) BOF Raw Material Handling with Baghouse (SMBOFTMB-S) BOF Raw Material Handling (SMBOFTHB-F) with Baghouse (SMBOFTHB-S) (6-0950) BOF Roof Monitor (SMBOFBOF-F) Cover Drying Stations (SMBOFCD1-2-F) Desulfurizer with Baghouse No. 1 (SMBOFDSB1-S) Desulfurizer with Baghouse No. 2 (SMBOFDSB2-S) Hot Metal Emergency Reladling Pit (SMBOFERP-F) equipped with natural gas flame suppression control. Hot Metal Reladling Pit (SMBOFRP-F) with Baghouse (SMBOFRPB-S) Ladle Drying Stations (SMBOFLD1-6-F) Reagent Silo Baghouse (SMBOFDSSB-S) Slag Skimming Station (SMBOFSS-F) with Baghouse (SMBOFSSB-S)	6-0943 (1966) 6-0950 (1984) 6-0943 (1966) 6-0943 (1966) 6-0950 (1984) 6-0943 (1966) 6-0943 (1966) 6-0943 (1966) 6-0943 (1966) 6-0950 (1984) 6-0950 (1984)
CONTINUOUS CASTERS	Ladle treatment station controlled by baghouse (SMCCLMS) Scarfig and Slitting (PMPS-F) Slab Caster Cooling Water Stack Vent #1 (SCCCW1-F) Slab Caster Cooling Water Stack Vent #2 (SMCCCW2-S) Tundish Drying (SMCCTD-S) Tundish Nozzle Shroud Preheating (SMCCNSP-F) Tundish Preheating (SMCCTP-F)	6-0943M (1983/Mod. 2000)
<u>HOT ROLLED PRODUCTS GROUP</u>		
HOT STRIP MILL	Hot Strip Mill A Reheat Furnace (HSMFA-S) Hot Strip Mill B Reheat Furnace (HSMFB-S) Hot Strip Mill Contact Water Cooling Tower (HSMCT-F) Hot Strip Mill Rolling Mill (HSMRM-F) Mill Scale Handling (HSMMSH-F)	6-0947 (1947/Mod. 1989)
<u>COATED PRODUCTS GROUP</u>		
No. 1 Coating (GALVANIZE) LINE	Annealing Gas Preheater (CSM1GPH-S) Melt Pot (CSM1GMP-F) Oiler (CSM1GMH-F) Passivation (CSM1GCP-F) Seals Reheat Furnace (CM1GSF-S) Steam Wiper (CSM1GSW-F)	6-0948 (1952) 6-0948 (1952) 6-0948 (1952) 6-0948 (1952) 6-0948 (1952) 6-0948 (1955)
No. 2 Coating (GALVANIZE) LINE	Galvanneal Furnace (CSM2GGF -S) Melt Pot (CSM2GMPT-F) Oiler (CSM2GMH-F)	6-0948 (1955) 6-0948 (1955) 6-0948 (1952)

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Emissions Unit Name	Emissions Unit Description	Registration Number (Date of Installation)
	Selas Reheat Furnace (CSM2GSF-S) Steam Dryer (CSM2GSD-F) Steam Superheater (CSM2GSS-S) Steam Wiper (CSM2GSW-F)	6-0948 (1955) 6-0948 (1955) 6-0948 (1955) 6-0948 (1955)
No. 3 Coating (GALVANIZE) LINE	Melt Pot (CSM3GMPT-F) Oiler (CSM3GMH-F) Roll Coater (CSM3GRC-F) Selas Reheat Furnace (CSM3GSF-S) Strip Preheater (CSM3GPH-S) No. 3 Galvalume line roll coater and caustic washer	6-0948 (1956/mod.1997) 6-0948 (1952) 6-0948 (1952) 6-0948 (1956/mod.1997) 6-0948 (1956/mod.1997) 6-0948 (1956/mod.1997)
No. 4 Coating (HOT DIP)	Alkaline Cleaning Tank/Cleaner Storage (CSM4HDAC-S) with Scrubber (CSM4HDACS-S) Melt Pots (CSM4HDMPT-F) Oiler (CSM4HDEO-F) Strip Preheater/Annealing Furnace (CSM4HDAF-S) Roll Coater (CSM4HDRC-F)	6-1732M (1993/mod. 2001) 6-1732M (1993/mod. 2001) 6-1732M (1993/mod. 2001) 6-1732M (1993/mod. 2001) 6-1732M (1993/mod. 2001)
COLD ROLLED PRODUCTS GROUP (Cold Reduction Mill)		
PICKLING LINE	Electrostatic Oiler (CRPPLEO-F) Pickling Storage Tanks (CRPLPST-S) Pickling Tanks (CRPPLPT-S) Scale Breaker (CRPPLSB-S) Anti-Coil Reel Scale Breaker Baghouse (CRPPLSBARBH-S). [Baghouse exhaust s to the inside of the building]	6-2371M (1999/mod. 2001) 6-2371M (1999/mod. 2001) 6-2371M (1999/mod. 2001) 6-2371M (1999/mod. 2001) 6-2371M (1999/mod. 2001)
TANDEM MILL	Tandem Mill (CRPTM-S) with mist eliminator	6-2371M (1999/mod. 2001)
SKIN PASS MILL	Oiler (CRPSPMEO-F) Skin Pass Mill (CRPSPM-S) with mist eliminator	6-2371M (1999/mod. 2001) 6-2371M (1999/mod. 2001)
HYDROGEN ANNEAL	Annealing Furnaces (CRPHA-F)	6-2371M (1999/mod. 2001)
	Tension Leveling Line Electrostatic Oiler (CRPTLEO-F).	6-2371 (1999/mod. 2001)
TIN PRODUCTS GROUP		
No. 3 PICKLER	Descaling (TM3PD-F) Oiling/Recoil (TM3POR-F) Steam Dry (TM3PSD-F) Tin Mill No.3 Pickler, Building Fugitives (TM3PMH-F) Tin Mill No.3 Pickler, Pickling Tanks (TM3P2,3,5-F). Unit has four scrubbers of which three operate at one time with fourth as a spare.	6-0949 (1957)
TANDEM MILL	Tandem Mill (TM48TMMH-S) with two mist eliminators	6-0949 (1957)
No. 6 WASHER	No. 6 Washer Steam Dryer (TM6WSD-F) Alkaline Cleaner with scrubber (TM6WS-S)	6-0949 (1957))

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Emissions Unit Name	Emissions Unit Description	Registration Number (Date of Installation)
No. 5 CONTINUOUS ANNEAL	Annealing Steam Dryer (TMCASD-F) Continuous Annealing Furnace (TMCAAF-S)	6-0949 (1957)
No. 6 SKIN PASS MILL	No. 6 Skin Pass Mill (TM6SPMMH-F) with Baghouse (TM6SPM-S). [Baghouse exhausts indoors]	6-0949 (1957)
No. 3 DUO MILL	No. 3 Duo Mill (TM3DM-S) <u>Fume exhaust duct with no controls</u>	6-0949 (1970)
COIL PREPARATION	No. 5 Coil Preparation Line Oiler (TM5CPO-F)	6-0949 (1960)
No. 1 TIN PLATE LINE	Electrostatic Oiler (TM1HLEO-F) No. 1 TPL with Scrubber Nos. 1 & 2 (TM1HLS1/2-S) No.1 TPL with Scrubber Nos. 3 & 4 (TM1HLS3/4-S)	6-0949M (1963/mod.2001)
No. 2 TIN PLATE LINE	Electrostatic Oiler (TM12HLEO-F) No. 2 TPL Scrubber No. 4, 5 (TM2HLS4and 5-S) No. 2 TPL Scrubber No. 1, 2, 3 (TM2HLS1,2,3-S)	6-0949M (1966/mod.2001))
Box annealing	Located at old Cold Mill (TMBA)	
No. 8 CHROME LINE	Electrostatic Oiler (TM8CLEO-F) No. 8 CL Scrubber No. 1 (TM8CLS1-S) No .8 CL Scrubber No. 2 (TM8CLS2-S)	6-0949 (1970)
POWER & UTILITIES		
PENNWOOD POWER	Pennwood Boiler No. 3 (PUPB3-S) Pennwood Boiler No. 4 (PUPB4-S) Pennwood Boiler No. 1 (PUPB1-S) Pennwood Boiler No. 2 (PUPB2-F)	5-0414 (1954) 5-0415 (1957) 5-0491 (1954) 5-0492 (1949)
CHROME RECOVERY	Chrome Reduction Plant Lime Silo with Baghouse (PUCRPLHB-S)	9-0949 (1987)
HUMPHRYS CREEK WWTP	Two Lime Silos with Baghouses (PUHCTPLSB-S) and NASH scrubber	9-0948 (1970)
MOBILE EQUIPMENT & YARD		
GREYS LANDFILL	Greys Landfill (MEYL-F)	6-0940 (1977)
COKE POINT LANDFILL	Coke Point Landfill (CPMEYL-F)	6-0940 (1977)
ROADWAYS	Paved Roads (MEYRTP-F) Unpaved Roads (MEYRTUP-F)	9-1027 (1996)
AUTOMOTIVE MAINTENANCE	Automobile and Mobile Equipment Maintenance Shops (MEYSHOP-F)	-
GASOLINE DISPENSING STATION	Gasoline - Storage Tanks (STPPASTTD69-F) Gasoline - Dispensing Facility (STPSUSTPG-F)	9-0428N (1982/mod. 1992)
MAINTENANCE SERVICES		
GENERAL SHOPS	All Refrigeration Operations (MSRS-F)	-

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Emissions Unit Name	Emissions Unit Description	Registration Number (Date of Installation)
	Carpentry Shop Sand Blasting (MSCSSB-S)	-
	Carpentry Shop with Cyclone (MSCSC-S)	-
	Solvent-based Parts Cleaners (MSSK-S)	-
	Tin Mills ROJO Baghouse	

OVERVIEW OF THE PART 70 PERMIT

Section I of the Part 70 Permit contains a brief description of the facility and an inventory list of the emission unit for which applicable requirements are identified in Section IV of the permit.

Section II of the Part 70 Permit contains the general requirements that relate to administrative permit actions. This section includes the procedures for renewing, amending, reopening, and transferring permits, the relationship to permits to construct and approvals, and the general duty to provide information and to comply with all applicable requirements.

Section III of the Part 70 Permit contains the general requirements for testing, record keeping and reporting; and requirements that affect the facility as a whole, such as open burning, air pollution episodes, particulate matter from construction and demolition activities, asbestos provisions, ozone depleting substance provisions, general conformity, and acid rain permit. This section includes the requirement to report excess emissions and deviations, to submit an annual emissions certification report and an annual compliance certification report, and results of sampling and testing.

Section IV of the Part 70 Permit identifies the emissions standards, emissions limitations, operational limitations, and work practices applicable to each emissions unit located at the facility. For each standard, limitation, and work practice, the permit identifies the basis upon which the Permittee will demonstrate compliance. The basis will include testing, monitoring, record keeping, and reporting requirements. The demonstration may include one or more of these methods.

Section V of the Part 70 Permit contains a list of insignificant activities. These activities emit very small quantities of regulated air pollutants and do not require a permit to construct or registration with the Department. For insignificant activities that are subject to a requirement under the Clean Air Act, the requirement is listed under the activity.

Section VI of the Part 70 Permit contains State-only enforceable requirements. Upon issuance of the Part 70 Permit, the Part 70 Permit supersedes the facility's current State Permit to Operate. Section VI identifies requirements that are not based on the Clean Air Act, but solely on Maryland air pollution regulations. These requirements generally relate to the prevention of nuisances and implementation of Maryland's Air Toxics Program.

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REGULATORY REVIEW/TECHNICAL REVIEW/COMPLIANCE METHODOLOGY

IRONMAKING

Emission Unit - Material Handling [6-0940]

BFOYMH: Ore Yard Material Handling.

BFBPMH: Bedding Plant Material Handling.

The above sources are fugitive sources of particulate matter from handling and processing of raw materials at the Ore Yard and the Bedding Plant. Reasonable controls used for particulate matter control are road sweeping and watering plan approved by MDE.

APPLICABLE STANDARDS/LIMITS

Control of Particulate Matter

COMAR 26.11.10.04B(1) - Fugitive Emissions of Particulate Matter "A person may not cause or permit the discharge of fugitive emissions of particulate matter from an iron and steel production installation unless reasonable control methods are employed to minimize emissions. These methods include the use of hoods and control equipment to capture emissions, other control techniques, and process restrictions."

Compliance Demonstration

The Permittee shall prepare and maintain a plan that contains an explanation of the reasonable precautions that will be used to prevent particulate matter from becoming airborne. Once a month and on windy days [wind speed greater than???], the Permittee shall perform an inspection of the operations to verify that the reasonable precautions are being implemented. The Permittee shall reevaluate the effectiveness of the reasonable precautions plan once per year. The Permittee shall maintain the plan of reasonable precautions and keep records of dates and results of visual observations. These records shall be kept on site for a period of at least five years. The Permittee shall submit the plan and records of visual observations to the Department upon request. **[Reference: COMAR 26.11.03.06C]**.

Rationale for Periodic Monitoring Strategy

If the Permittee has a plan prepared and implements the plan, fugitive emissions should be minimized. The Permittee is required to perform visual observations on windy days and at least once a month to evaluate whether the reasonable precautions plan is sufficient and being implemented.

Emissions Unit – Sinter Plant [6-0941]

BFSPCS: Cold Screening with Crusher/Hot/Cold/ screening Baghouse (BFSPCHSB).

BFSPC: Sinter Strand with Windbox Cyclones which includes the following:

- (1) **BFSPFC1S:** Sinter Strand with Scrubber No 1.
- (2) **BFSPFC2S:** Sinter Strand with Scrubber No 2.
- (3) **BFSPCO:** Cooler with Multicyclone (BFSPCOM).
- (4) **BFSPSSDE:** Fugitives with Baghouse (BFSPCHSB).

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(5) **BFSPSSRM:** Sinter Strand Roof Monitor – plant building discharge end.

BFSPHS: Hot Screening with Crusher/Hot/Cold Screening Baghouse (BFSPCHSB)

BFSPBLSB: Burnt Lime Silo with Baghouse. The baghouse controls the particulate matter emissions generated from the Burnt Lime tank vent during the burnt lime delivery process at the sinter plant. The baghouse is not designed to work at times other than delivery. The burnt lime (CaO) storage silo equipped with the Baghouse-Model 72AV516 (99% efficiency) was added to the existing sinter plant permit in September 1989 (Permit Number PTC 03-6-0941M).

BFSPWTLSB: Water Treatment Lime Silo with Baghouse.

BFSPHS: Hot Screening with Crusher/Hot/Cold/ Screening Baghouse (BFSPCHSB).

The No. 7 Sinter Strand, which was constructed in 1975, fuses iron-bearing fines, mill scale, steel making dust, and iron-bearing dust together to form a high-quality iron clinker substitute for use in the blast furnace.

The sintering process includes; material handling and storage, bedding plant, traveling-grate sinter hearth, sinter sizing and cooling, and a variety of environmental controls.

The Sinter Plant makes use of several different devices to control air pollution from the process. The devices include:

1. Multi-cyclone on the sinter cooler exhaust;
2. Baghouse to control crushing, screening and material handling dust;
3. (2) venturi scrubber systems, each comprising of one simple cyclone, a wind box and a venturi scrubber for the control emissions from the sinter line.

The multi-cyclone on the sinter cooler was manufactured by Zurn Industries and has a gas flow rate through the system of approximately 640,000 cfm. The maximum pressure drop across the cyclone is 5 inches of water.

The material handling baghouse was manufactured by Industrial Clean Air and consists of 14 components with a total gas flow rate of approximately 340,000 cfm. The baghouse operates with a pressure drop of 6 inches of water.

The venturi scrubber system consists of a double bank of Buell mechanical cyclones, a wind box exhaust fan followed by a smaller booster fan, and a koch cone-type venturi scrubber with mist eliminator equipment stacks.

In the fall of 2001, VOC continuous emission monitors were installed on the two sinter plant scrubber stacks to demonstrate continuous compliance with the facility's **VOC RACT 0.25 lb VOC/ton of sinter plant emission standard**. An initial performance test was performed on the CEM system in January 2002. The CEM systems on the Sinter Plant include; (2) Model 109A J.U.M VOC monitors with a 300ppm CH₄ range and (2) Model 100 Ultraflow volumetric flow rate monitors.

Emissions from the sinter plant as reported in the facility's annual emission certification report are:

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Year	SO _x (tpy)	NO _x (tpy)	PM ₁₀ (tpy)	VOC (tpy)	CO (tpy)
2002	2,841	2,191	693	173	38,492
2001	2,728	2,104	665	416	36,961
2000	2,882	2,223	703	703	39,047

APPLICABLE STANDARDS/LIMITS

A. Control of Visible Emissions

(1) COMAR 26.11.10.03A(1) – Visible Emissions

“A person may not cause or permit the discharge of emissions from any installation, other than water in an uncombined form, which is visible to human observers.”

COMAR 26.11.10.03A(2) – Exceptions. “Section A(1) of this regulation does not apply to the following: (e) Confined emissions resulting from start-ups, process modifications or adjustments, or occasional cleaning of control equipment if: (i) The visible emissions are not greater than 40 percent opacity; and (ii) The visible emissions do not occur for more than 6 consecutive minutes in any 60 minute period.”

(2) COMAR 26.11.10.03B(4) – Visible Emissions from Certain Installations

“After complying with the requirements of Regulation .04B of this chapter, a person may not cause or permit the discharge of visible fugitive emissions into the outdoor atmosphere, other than water in an uncombined form, which is greater than the following specified visible emission standards: (4) **Sinter plant building (including the discharge end)**: 10 percent opacity as averaged over any consecutive 6-minute period.”

Additional requirements see MACT Requirements – Table 2a.

Compliance Demonstration

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(1) **For Sinter Strand with Scrubber No. 1 and No. 2 only:** Beginning in calendar year 2006, the Permittee shall conduct annual particulate testing (EPA Method 5 or other testing method approved by the Department) to determine compliance with COMAR 26.11.10.04A. The Permittee shall maintain the hourly average pressure drop and scrubber water flow rate at level no lower than those established at the most recent particulate test. The Permittee shall visually inspect the exhaust gases from fugitive baghouses and multicyclone cooler stack for visible emissions once a week for an 18-minute period and shall record the results of each observation. If no visible emissions are observed in six consecutive months for the exhaust stack of any emission unit, the Permittee may decrease the frequency of visual inspection from once weekly to once monthly for the exhaust stack of that emission unit. If visible emissions are observed during any monthly visual inspection, the Permittee must resume visible inspection of the exhaust stack of that emission unit once a week basis and maintain that schedule until no visible emissions are observed in six consecutive months. If no visible emissions are observed during the once a month visible inspection for the exhaust stack of any emission unit, the Permittee may decrease the frequency of visual inspection from monthly to semi-annually for the exhaust stack of that emission unit. If visible emissions are observed during any semi-annual visible inspection, the Permittee must resume visible inspection of the exhaust stack of that emission unit on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly inspections. The Permittee shall maintain on site a log of the dates and results of visible emissions observations for a period of at least five years. The Permittee shall report incidents of visible emissions in accordance with permit condition 4, Section III, Plant Wide Conditions, "Report of Excess Emissions and Deviations" The Permittee shall also make the records of visual emission inspections and significant maintenance performed, malfunctions, downtime and episodes of reduced efficiency of pollution control equipment, available to the Department upon request. **[Reference: COMAR 26.11.03.06C].**

(2) For Sinter Plant building

The Permittee shall conduct an EPA Method 9 observation once a month for 18-minutes to demonstrate compliance with the opacity limit in accordance with TM91-01 Method 1004H. The Permittee shall maintain on site a log of the dates and results of the Method 9 observations for a period of at least five years. The Permittee shall make the results of the Method 9 observations available to the Department upon request. **[Reference: COMAR 26.11.03.06C].**

**B. Control of Particulate Emissions
For Scrubber, cyclones and baghouses**

COMAR 26.11.10.04A – Particulate Matter Confined Emissions

"A person may not cause or permit the discharge of confined emissions of particulate matter in excess of 0.03 gr/scfd (68.7 mg/dscm) from any iron or steel production installation."

COMAR 26.11.10.04B(1) – Particulate Matter Fugitive Emissions

"A person may not cause or permit the discharge of fugitive emissions of particulate matter from an iron and steel production installation unless reasonable control methods are employed to minimize emissions. These methods include the use of hoods and control equipment to capture emissions, other control techniques, and process restrictions."

COMAR 26.11.10.04B(2)(f) – Fugitive Emissions Sinter Plant Building

"Reasonable Control Methods Required to Satisfy §B(1) of this Regulation. Reasonable control

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methods required to satisfy §B(1) of this regulation are listed below for the installation specified, grouped by major buildings or structures. No other control methods are required for those buildings, structures, or installations. The reasonable control methods are: (f) **Sinter plant building: breaker box, windbox, hot and cold screens, entrance and exit from the sinter cooler, and material handling transfer points-----hooded and exhausted into control equipment.**"

Additional requirements see MACT Requirements – Table 2a.

Compliance Demonstration

See MACT requirements for compliance demonstration.

C. Control of VOC Emissions

For Sinter Strand Scrubber only

COMAR 26.11.10.06C(1) – Control of VOC Emissions from Sintering Plants

"A person who owns or operates a sintering plant subject to this regulation shall meet an emissions standard calculated on a daily average basis of 0.25 pound of VOC per ton of sinter produced."

Additional requirements see MACT Requirements – Table 2a.

Compliance Demonstration

The Permittee shall utilize the CEM system and other necessary data to demonstrate continuous compliance with §C(1) of this regulation. [Reference: COMAR 26.11.10.06C(3)(e)]. The Permittee shall maintain records of the following: (i) Daily average VOC emissions from the sinter plant stacks, and (ii) Daily sinter production. [Reference: COMAR 26.11.10.06C(3)(d) & COMAR 26.11.03.06C] The Permittee shall provide quarterly reports to the Department summarizing: (i) Daily average VOC emissions from the sinter plant stacks, and (ii) Daily sinter production. [Reference: COMAR 26.11.10.06C(3)(f)]

D. Control of NO_x Emissions

COMAR 26.11.09.08J – Requirements for Industrial Furnaces and Other Miscellaneous Installations that Cause Emissions of NO_x. "A person who owns or operates any installation other than fuel-burning equipment that causes NO_x emissions shall:

- 1) Maintain good operating practices as recommended by the equipment vendor to minimize emissions;
- 2) Prepare and implement a written in-house training program for all operators of these installations that include instruction on good operating and maintenance practices for the particular installation;
- 3) Maintain and make available to the Department, upon request, the written in-house operator training program;
- 4) Burn only gas in each installation, where gas is available, during the period May 1 through September 30 of each year; and
Maintain operator training attendance records for each operator at the site for at least 2 years and make these records available to the Department upon request."

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Compliance Demonstration

The Permittee shall maintain good operating practices as recommended by the equipment vendor to minimize NO_x emissions. [Reference: COMAR 26.11.09.08J(1)] The Permittee shall prepare and implement a written in-house training program for all operators of these installations that include instruction on good operating and maintenance practices for the particular installation. (Note: COMAR 26.11.09.08B(5)(a) states that "for the purpose of this regulation the equipment operator to be trained may be the person who maintains the equipment and makes the necessary adjustments for efficient operations." The Permittee shall maintain the written in-house operator-training program and operator training attendance records for each operator at the site for at least 2 years. The Permittee shall make available the Department, upon request, the written in-house operator-training program and records of operator training attendance. [Reference: COMAR 26.11.09.08J(2)]

Emissions Unit – Sinter Plant [6-0941] Cont'd
MACT Requirement

BFSPC: Sinter Strand with Windbox Cyclones.
BFSPCO: Cooler with Multicyclone (BFSPCOM).
BFSPSSDE: Discharge End Fugitives with Baghouse (BFSPCHSB).
BFSPSSRM: Sinter Strand Roof Monitor.
BFSPFC1S: Sinter Strand with Scrubber No 1.
BFSPFC2S: Sinter Strand with Scrubber No 2.
BFSPDOL: Sinter Strand Duct Leaks.

**40 CFR Part 63 Subpart FFFFF – National Emission Standards for Hazardous Air Pollutants:
Integrated Iron and Steel Manufacturing**

Applicability

§63.7781 – "Each owner or operator of an affected source at an integrated iron and steel manufacturing facility that is (or is part of) a major source of HAP emissions must comply with this final rule."

§63.7782 – **Parts of the plant covered**

(a) This subpart applies to each new and existing affected source at an integrated iron and steel manufacturing facility.

(b) The affected sources are each new or **existing sinter plant**, blast furnace, and basic oxygen process furnace (BOPF) shop at an integrated iron and steel manufacturing facility.

(c) This subpart covers emissions from the **sinter plant windbox exhaust, discharge end, and sinter cooler**; the blast furnace cast house; and the BOPF shop including each individual BOPF and shop ancillary operations (hot metal transfer, hot metal desulfurization, slag skimming, and ladle metallurgy).

(d) The **sinter plant**, blast furnace, or BOPF shop at your integrated iron and steel manufacturing facility exists if you commenced construction or reconstruction of the affected source before July 13, 2001.

§63.7783 – **Compliance Dates**

(a) If you have an existing affected source, the Permittee must comply with each emission limitation and operation and maintenance requirement in this subpart that applies to the Permittee no later than

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(e) You must meet the notification and schedule requirements in Sec. 63.7840. Several of these notifications must be submitted before the compliance date for your affected source.

APPLICABLE STANDARDS/LIMITS

Control of Visible Emissions (Opacity) and Particulate Matter

§63.7790(a)– Emission and Opacity Limits

(a) The Permittee must meet each emission limit and opacity limit in Table 1 (of the MACT) to this subpart that applies.

1. ***Each windbox exhaust stream at an existing sinter plant*** – the Permittee must not cause to be discharged to the atmosphere any gases that contain **particulate matter** in excess of 0.4 lb/ton of product sinter

3. ***Each discharge end at an existing sinter plant***

a. You must not cause to be discharged to the atmosphere any gases that exit from one or more control devices that contain, on a flow-weighted basis, **particulate matter** in excess of 0.02 gr/dscf, and

b. You must not cause to be discharged to the atmosphere any secondary emissions that exit any opening in the building or structure housing the discharge end that exhibit **opacity** greater than 20 percent (6-minute average).

5. ***Each sinter cooler stack at an existing sinter*** - You must not cause to be discharged to the atmosphere any gases that contains **particulate mater** in excess of 0.03 gr/dscf.

Control of VOC emissions

§63.7790(d) - For **each sinter plant**, you must either:

- (1) Maintain the 30-day rolling average oil content of the feedstock at or below 0.02 percent; **or**
- (2) Maintain the 30-day rolling average of volatile organic compound emissions from the windbox exhaust stream at or below 0.2 lb/ ton of sinter.

§63.7810 - General Compliance Requirements

(a) You must be in compliance with the emission limitations and operation and maintenance requirements in this subpart at all times, except during periods of startup, shutdown, and malfunction as defined in Sec. 63.2.

(b) During the period between the compliance date specified for your affected source in Sec. 63.7783 and the date upon which continuous monitoring systems have been installed and certified and any applicable operating limits have been set, you must maintain a log detailing the operation and maintenance of the process and emissions control equipment.

(c) You must develop and implement a written startup, shutdown, and malfunction plan according to the provisions in Sec. 63.6(e)(3).

Operational Standards

§63.7790(b) – Operating Limits

(b) The Permittee must meet each operating limit for capture systems and control devices in paragraphs (b)(1) through (3) of this section that applies to you.

(1) The Permittee must operate each capture system applied to emissions from a **sinter plant discharge end** or blast furnace cast house or to secondary emissions from a BOPF at or above the

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lowest value or settings established for the operating limits in your operation and maintenance plan;
(2) For each venturi scrubber applied to meet any particulate emission limit in Table 1 [of the MACT] to this subpart, you must maintain the hourly average pressure drop and scrubber water flow rate at or above the minimum levels established during the initial performance test.

(c) An owner or operator who uses an air pollution control device other than a baghouse, venturi scrubber, or electrostatic precipitator must comply in accordance with requirements provided in §63.7790 (c) of this subpart.

§63.7800(a) – Operation and Maintenance Requirements

(a) As required by Sec. 63.6(e)(1)(i), you must always operate and maintain your affected source, including air pollution control and monitoring equipment, in a manner consistent with good air pollution control practices for minimizing emissions at least to the levels required by this subpart.

(b) You must prepare and operate at all times according to a written operation and maintenance plan for each capture system or control device subject to an operating limit in Sec. 63.7790(b). Each plan must address the elements in paragraphs (b)(1) through (5) of this section.

Compliance Demonstration

§63.7820 - Initial Compliance Requirements

The Permittee must conduct a performance test to demonstrate initial compliance with each emission and **opacity limit** in Table 1 Subpart FFFFF, Part 63. The Permittee must conduct the performance tests within 180 calendar days after the compliance date that is specified in §63.7783 for the affected source and report the results in the notification of compliance status.

§63.7821 - The Permittee must conduct subsequent performance test to demonstrate compliance with all applicable **PM and opacity limits** in Table 3, Subpart FFFFF, Part 63 but no less frequently than **twice (at mid term and renewal)** during each term of the Title V operating permit.

§63.7822 – §63.7826. All applicable performance tests and compliance demonstrations must be conducted in accordance with the test methods as provided in §63.7822, §63.7823, and §63.7824. The Permittee must comply with the requirements in §63.7825 and §63.7826 to demonstrate initial compliance with applicable emission limitations and with the operation and maintenance requirements that apply respectively.

§63.7830 – Continuous Compliance Monitoring

(a) For each capture system subject to an operating limit in Sec. 63.7790(b)(1) established in your capture system operation and maintenance plan, you must install, operate, and maintain a CPMS according to the requirements in Sec. 63.7831(e) and the requirements in paragraphs (a)(1) through (3) of this section.

(1) Dampers that are manually set and remain in the same position are exempt from the requirement to install and operate CPMS. If dampers are not manually set and remain in the same position, you must make a visual check at least once every 24 hours to verify that each damper for the capture system is in the same position as during the initial performance test.

(2) If you use a flow measurement device to monitor the operating limit parameter for a **sinter plant discharge end** or blast furnace cast house, you must monitor the hourly average rate (e.g. the hourly average actual volumetric flow rate through each separately ducted hood, the average hourly total volumetric flow rate at the inlet to the control device) according to the requirements in §63.7832.

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(3) If you use a flow measurement device to monitor the operating limit parameter for a capture system applied to secondary emissions from a BOPF, you must monitor the average rate for each steel production cycle (e.g., the average actual volumetric flow rate through each separately ducted hood for each steel production cycle, the average total volumetric flow rate at the inlet to the control device for each steel production cycle) according to the requirements in §63.7832.

(b) For each baghouse applied to meet any particulate emission limit in Table 1 of this subpart, you must install, operate, and maintain a bag leak detection system according to **Sec. 63.7831(f)**, monitor the relative change in particulate matter loadings according to the requirements in **Sec. 63.7832**, and conduct inspections at their specified frequencies according to the requirements in paragraphs (b)(1) through (8) of this section.

(1) Monitor the pressure drop across each baghouse cell each day to ensure pressure drop is within the normal operating range identified in the manual.

(2) Confirm that dust is being removed from hoppers through weekly visual inspections or other means of ensuring the proper functioning of removal mechanisms.

(3) Check the compressed air supply for pulsejet baghouses each day.

(4) Monitor cleaning cycles to ensure proper operation using an appropriate methodology.

(5) Check bag cleaning mechanisms for proper functioning through monthly visual inspection or equivalent means.

(6) Make monthly visual checks of bag tension on reverse air and shaker-type baghouses to ensure that bags are not kinked (knead or bent) or laying on their sides. You do not have to make this check for shaker-type baghouses using self-tensioning (spring-loaded) devices.

(7) Confirm the physical integrity of the baghouse through quarterly visual inspections of the baghouse interior for air leaks.

(8) Inspect fans for wear, material buildup, and corrosion through quarterly visual inspections, vibration detectors, or equivalent means.

(c) For each venturi scrubber subject to the operating limits for pressure drop and scrubber water flow rate in Sec. 63.7790(b)(2), you must install, operate, and maintain CPMS according to the requirements in Sec. 63.7831(g) and monitor the hourly average pressure drop and water flow rate according to the requirements in Sec. 63.7832.

(e) For each **sinter plant** subject to the operating limit in Sec. 63.7790(d), the Permittee must either:

(1) Compute and record the 30-day rolling average of the oil content of the feedstock for each operating day using the procedures in Sec. 63.7824(e); or

(2) Compute and record the 30-day rolling average of volatile organic compound emissions (lbs/ton of sinter) for each operating day using the procedures in Sec. 63.7824(f).

§63.7833 – Compliance demonstration with applicable emission limitations

(a) You must demonstrate continuous compliance for each affected source subject to an emission or opacity limit in **Sec. 63.7790(a)** by meeting the requirements in Table 3 to this subpart.

(b) You must demonstrate continuous compliance for each capture system subject to an operating limit in Sec. 63.7790(b)(1) by meeting the requirements in paragraphs (b)(1) and (2) of this section.

(c) For each baghouse applied to meet any particulate emission limit in Table 1 to this subpart, you must demonstrate continuous compliance by completing the requirements in paragraphs (c)(1) and (2) of this section.

(1) Operate the capture system at or above the lowest values or settings established for the operating limits in your operation and maintenance plan; and

(2) Monitor the capture system according to the requirements in Sec 63.7830(a) and collect, and

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record the monitoring data for each of the operating limit parameters according to the applicable requirements of this subpart.

(c) For each baghouse applied to meet any particulate emission limit in Table 1, Subpart FFFFF, Part 63, you must demonstrate continuous compliance by completing the requirements in paragraphs (c)(1) and (2) of this section:

- (1) Maintaining records of the time you initiated corrective action in the event of a bag leak detection system alarm, the corrective actions(s) taken, and the date on which corrective action was completed.
- (2) Inspecting and maintaining each baghouse according to the requirements in Sec. 63.7831(f) and recording all information needed to document conformance with these requirements. If you increase or decrease the sensitivity of the bag leak detection system beyond the limits specified in Sec. 63.7831(f)(6), you must include a copy of the required written certification by a responsible official in the next semiannual compliance report.

(d) For each venturi scrubber subject to the operating limits for pressure drop and scrubber water flow rate in Sec. 63.7790(b)(2), you must demonstrate continuous compliance by completing the requirements of paragraphs (d)(1) through (3) of this section.

- (1) Maintaining the hourly average pressure drop and scrubber water flow rate at levels no lower than those established during the initial or subsequent performance test;
- (2) Operating and maintaining each venturi scrubber CPMS according to Sec. 63.7831(g) and recording all information needed to document conformance with these requirements; and
- (3) Collecting and reducing monitoring data for pressure drop and scrubber water flow rate according to Sec. 63.7831(b) and recording all information needed to document conformance with these requirements.

(f) For each new or existing **sinter plant** subject to the operating limit in Sec. 63.7790(d), you must demonstrate continuous compliance by **either**:

- (1) For the **sinter plant feedstock oil content operating limit** in Sec. 63.7790(d)(1),
 - (i) Computing and recording the 30-day rolling average of the percent oil content for each operating day according to the performance test procedures in Sec. 63.7824(e);
 - (ii) Recording the sampling date and time, oil content values, and sinter produced (tons/day); **and**
 - (iii) Maintaining the 30-day rolling average oil content of the feedstock no higher than 0.02 percent.
- (2) For the **volatile organic compound operating limit** in Sec. 63.7790(d)(2),
 - (i) Computing and recording the 30-day rolling average of volatile organic compound emissions for each operating day according to the performance test procedures in Sec. 63.7824(f);
 - (ii) Recording the sampling date and time, sampling values, and sinter produced (tons/day); **and**
 - (iii) Maintaining the 30-day rolling average of volatile organic compound emissions no higher than 0.2 lb/ton of sinter produced.

63.7842(a) – The Permittee must keep the following records:

- (1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any initial notification or notification of compliance status that you submitted, according to the requirements in Sec. 63.10(b)(2)(xiv).
- (2) The records in Sec. 63.6(e)(3)(iii) through (v) related to startup, shutdown, and malfunction.
- (3) Records of performance tests, performance evaluations, and opacity observations as required in Sec. 63.10(b)(2)(viii).

(c) The Permittee must keep the records required in Sec. 63.6(h)(6) for visual observations.

(d) The Permittee must keep the records required in Sec. Sec. 63.7833 and 63.7834 to show continuous compliance with each emission limitation and operation and maintenance requirement that applies to you.

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§63.7843 - Other Record keeping Requirements

(a) Records must be in a form suitable and readily available for expeditious review, according to Sec. 63.10(b)(1).

(b) As specified in Sec. 63.10(b)(1), the Permittee must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

(c) The Permittee must keep each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record according to Sec. 63.10(b)(1). You can keep the records offsite for the remaining 3 years.

§63.7840 – Notification Requirements

(a) The Permittee must submit all of the notifications in Sec. Sec. 63.6(h)(4) and (5), 63.7(b) and (c), 63.8(e) and (f)(4), and 63.9(b) through (h) that apply to you by the specified dates.

(b) As specified in Sec. 63.9(b)(2), if you startup your affected source before May 20, 2003, you must submit your initial notification no later than September 17, 2003.

(d) If you are required to conduct a performance test, you must submit a notification of intent to conduct a performance test at least 60 calendar days before the performance test is scheduled to begin as required in Sec. 63.7(b)(1).

(e) If you are required to conduct a performance test, opacity observation, or other initial compliance demonstration, you must submit a notification of compliance status according to Sec. 63.9(h)(2)(ii).

(1) For each initial compliance demonstration that does not include a performance test, you must submit the notification of compliance status before the close of business on the 30th calendar day following completion of the initial compliance demonstration.

(2) For each initial compliance demonstration that does include a performance test, you must submit the notification of compliance status, including the performance test results, before the close of business on the 60th calendar day following the completion of the performance test according to Sec. 63.10(d)(2).

§63.7841 - Reporting Requirements

(a) Compliance report due dates. Unless the Administrator has approved a different schedule, you must submit a semiannual compliance report to your permitting authority according to the requirements in paragraphs (a)(1) through (5) of this section.

(b) Compliance report contents. Each compliance report must include the information in paragraphs (b)(1) through (3) of this section and, as applicable, paragraphs (b)(4) through (8) of this section.

(c) Immediate startup, shutdown, and malfunction report. If you had a startup, shutdown, or malfunction during the semiannual reporting period that was not consistent with your startup, shutdown, and malfunction plan, you must submit an immediate startup, shutdown, and malfunction report according to the requirements in Sec. 63.10(d)(5)(ii).

(d) Part 70 monitoring report. If you have obtained a title V operating permit for an affected source pursuant to 40 CFR part 70 or 71, you must report all deviations as defined in this subpart in the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A). If you submit a compliance report for an affected source along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), and the compliance report includes all the required information concerning deviations from any emission limitation or operation and maintenance requirement in this subpart, submission of the compliance report satisfies any obligation to report the same deviations in the semiannual monitoring report. However, submission of

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a compliance report does not otherwise affect any obligation you may have to report deviations from permit requirements for an affected source to your permitting authority.

Emission Unit - L-BLAST FURNACE [6-0939]

L-Blast Furnace consisting of the following:

- (1) Cast house roof monitor (**BFBFCH**) with baghouse for Casting Emissions from troughs (**BFBFFB**)
- (2) Dust Catcher. (**BFBFFBDC**) – [No emissions]
- (3) Slag Pit. (**BFBFSP**) – [insignificant activity, dumping into pit]
- (4) Emergency Bleeder (**BFBFEB**) [no emissions burns blast furnace gas]
- (5) B Street East Bleeder (**BFBFBSEB**) [no emissions burns blast furnace gas]
- (6) B Street West Bleeder (**BFBFBSWB**) [no emissions burns blast furnace gas]
- (7) 4 Stoves (**BFBFS**) Stacks

BFBFHMCD: Hot Metal Car Dryout. [Insignificant activity; natural gas lance to dry out car]

L Blast Furnace began operation in November 1978 and has a capacity 10,000 tons of hot metal per day. The function of the blast furnace is to reduce iron ore or sinter into molten iron for further processing in the basic oxygen furnaces. In the Blast Furnace, iron-bearing material (sinter), reactant (coke), and flux (limestone and/or dolomite) are continuously charged into the top of the furnace. At the same time, heated air (blast) from two of the four stoves and other injectants (pulverized coal, natural gas or oil) are blown in at the bottom of the furnace through tuyeres equally spaced around the periphery of the furnace. The blast is preheated in stoves to temperatures of 2200°F to 2500°F. The heated air burns part of the reactant (coke) to produce the heat for the chemical reaction involved in melting the sinter mix. The remaining balance of reactant removes the oxygen combined with the metal. As the reactant burns, it produces carbon monoxide, which in turn reacts with the iron ore in the sinter to form iron (also known as pig iron or hot metal). As the burden (mixture of sinter, coke, and limestone) descends to the bottom of the furnace in a molten state, the limestone reacts with impurities in the coke and sinter to form slag. Sometimes a superfluxed sinter is used, which contains enough limestone in it to flux the impurities out of the molten burden limiting or reducing the need to add limestone.

When the molten iron and slag reach the bottom of the furnace, the furnace is tapped (cast) through one of four notches or opening in the bottom of the furnace. The hot metal flows down covered runners (troughs) in the floor of the cast house into hot-metal transfer cars (submarine cars). The hot metal is either transferred to Maryland Pig Services for casting into "pigs", to the Basic Oxygen Furnace for conversion into steel, or beached in the old No. 3 mold yard to be reclaimed later and reused. Slag formed from the melting process is lighter than the liquid iron and floats on top of the iron during the casting. The slag can be skimmed of the top of the liquid iron and sent to the Lafarge granulation plant for further processing or dumped into the emergency slag pit to be reclaimed later.

Blast furnace gas (primary CO) generated from the chemical reaction in the furnace is removed from the top of the furnace, passed through a "dust –catcher" to remove large particulates, then further cleaned through Bischoff scrubbers. The blast furnace gas is burned in the stoves to supply the hot blast to the furnace. Excess blast furnace gas is burned in the Pennwood Boiler House for the generation of electricity or flared/bled to the atmosphere

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Local hoods located over the tap hole, skimmer, and molten liquid transfer points and by a system of runner covers over the troughs in the cast house floor control particulate emissions from the L Blast Furnace. Whenever a tap hole is opened, the entire control system will normally be operational with the exception of the trough cover near the tap hole, which must be removed for brief periods to allow access for the tap hole drill and the mud-gun. The emissions collected by the hoods are ducted to a baghouse.

On January 4, 1999, the Company received a permit to construct to modify the L Blast Furnace to include the addition of pulverized coal as an alternative injectant to oil and natural gas.

On October 10, 2000, the Company tested the L Blast Furnace stoves to evaluate the emissions of the stoves while firing on blast furnace gas that was generated while injecting pulverized coal into the furnace as a reactant in place of natural gas and oil. The testing showed that there were no discernible changes in emissions when burning blast furnace gas that was generated while injecting coal versus natural gas or oil. During the test, the following emission rates were determined:

NO _x	-0.0035 lbs NO _x /million Btu fuel fired
VOC	-0.006 lbs VOC/million Btu fuel fired
CO	-3.0 lbs CO/million Btu fuel fired
SO _x	-0.6 lbs SO _x /million Btu natural gas fired
	-10 lbs SO _x /million Btu blast furnace gas fired

APPLICABLE STANDARDS/LIMITS

A. Control of Visible Emissions

For Cast house baghouse and Stoves Stack

COMAR 26.11.10.03A(1) – Visible Emissions

“A person may not cause or permit the discharge of emissions from any installation, other than water in an uncombined form, which is visible to human observers.”

COMAR 26.11.10.03A(2) – Exceptions. “Section A(1) of this regulation does not apply to the following: (e) Confined emissions resulting from start-ups, process modifications or adjustments, or occasional cleaning of control equipment if: (i) The visible emissions are not greater than 40 percent opacity; and (ii) The visible emissions do not occur for more than 6 consecutive minutes in any 60 minute period.”

For Cast house Building (roof monitor) only

COMAR 26.11.10.03B(2) – Visible Emissions from Certain Installations

“After complying with the requirements of Regulation .04B of this chapter, a person may not cause or permit the discharge of visible fugitive emissions into the outdoor atmosphere, other than water in an uncombined form, which is greater than the following specified visible emission standards: (2) Blast furnaces constructed on or after January 1, 1977 (**cast house building**): 5 percent opacity as averaged over any consecutive 6-minute period, except for 20 percent opacity as averaged over any consecutive 6-minute period during drilling, oxygen lancing, and plugging of the furnace tap holes.”

Additional requirements see MACT Requirements for cast house baghouse and roof monitor -

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Table 3a.

Compliance Demonstration

For Cast house Baghouse and Stoves stack only: The Permittee shall visually inspect the exhaust gases from all control equipment [baghouses and stoves] stack for visible emissions once a week for an 18minute period and shall record the results of each observation. If no visible emissions are observed in six consecutive months for the exhaust stack of any emission unit, the Permittee may decrease the frequency of visual inspection from once weekly to once monthly for the exhaust stack of that emission unit. If visible emissions are observed during any monthly visual inspection, the Permittee must resume visible inspection of the exhaust stack of that emission unit once a week basis and maintain that schedule until no visible emissions are observed in six consecutive months. If no visible emissions are observed during the once a month visible inspection for the exhaust stack of any emission unit, the Permittee may decrease the frequency of visual inspection from monthly to semi-annually for the exhaust stack of that emission unit. If visible emissions are observed during any semi-annual visible inspection, the Permittee must resume visible inspection of the exhaust stack of that emission unit on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly inspections. The Permittee shall maintain on site a log of the dates and results of visible emissions observations for a period of at least five years. The Permittee shall report incidents of visible emissions in accordance with permit condition 4, Section III, Plant Wide Conditions, "Report of Excess Emissions and Deviations." The Permittee shall also make the records of visual emission inspections available to the Department upon request. **[Reference: COMAR 26.11.03.06C].**

For Cast house Building (roof monitor) only: The Permittee shall perform a walk through inspection of the Cast house, building once a week, while it is operating, and observe each point of fugitive emissions for visible emissions. The Permittee shall also, once a month, perform visual emission observation for 6 consecutive minutes when evaluating visible emissions. If visible emissions are observed, the Permittee shall perform a reference EPA Method 9 observation of the visible emissions for an 18-minute period. If visible emissions are in excess of 5 percent, the Permittee shall perform a daily observation for 18 minutes until corrective action has reduced visible emissions to less than 5 percent as averaged over a 6-minute period. During drilling, oxygen lancing and plugging of the furnace tap holes, the Permittee must perform daily observations if visible emissions are in excess of 20 percent as averaged over any 6-minute consecutive period and take appropriate measures to reduce visible emissions to less than 20 percent. The Permittee shall also maintain records of the results of walk through inspections, visible emissions observations and EPA Method 9 observations. **[Reference: COMAR 26.11.03.06C]** The Permittee shall report the results of walk through inspections, visual observations, and EPA Method 9 observations to the Department in the quarterly report.

B. Control of Particulate Matter

For Baghouse and Stoves Stack only

COMAR 26.11.10.04A – Particulate Matter Confined Emissions

"A person may not cause or permit the discharge of confined emissions of particulate matter in excess of 0.03 gr/scfd (68.7 mg/dscm) from any iron or steel production installation".

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For Cast house Building (roof monitor) only

COMAR 26.11.10.04B(1) – Particulate Matter Fugitive Emissions

“A person may not cause or permit the discharge of fugitive emissions of particulate matter from an iron and steel production installation unless reasonable control methods are employed to minimize emissions. These methods include the use of hoods and control equipment to capture emissions, other control techniques, and process restrictions.”

COMAR 26.11.10.04B(2)(b) – Particulate Matter Fugitive Emissions

“Reasonable Control Methods Required to Satisfy §B(1) of this Regulation. Reasonable control methods required to satisfy §B(1) of this regulation are listed below for the installation specified, grouped by major buildings or structures. No other control methods are required for those buildings, structures, or installations. The reasonable control methods are: (b) Blast furnaces constructed on or after January 1, 1977 (cast house building): iron notch, trough, and slag runners----hoods and control equipment.”

Additional requirements see MACT Requirements - Table 3a.

Compliance Demonstration

For Cast house Building only – See MACT requirements for testing, monitoring record keeping and reporting (TMRR) compliance demonstration.

C. Control of VOC Emissions

COMAR 26.11.10.06E – Control of VOC Emissions from Miscellaneous Production Installations. “A person who owns or operates a basic oxygen furnace or blast furnace shall: (1) Develop and maintain a good management practices plan for each installation; (2) Implement the good management practices plan to reduce VOC emissions; and (3) Make the plan available to the Department upon request.”

Additional requirements see MACT Requirements – Table 3a.

Compliance Demonstration

The Permittee shall prepare, implement and revise as necessary, good management practices plan for each Blast furnace installation to reduce VOC emissions. The Permittee shall maintain written or printable electronic copies of all good management practices plan for each Blast Furnace installation to reduce VOC emissions. The Permittee shall make available to the Department upon request copies of good management practices plan for each Blast furnace installation for VOC emission reduction. [Reference: COMAR 26.11.03.06C]

D. Control of NO_x Emissions

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For Stoves and Furnace

COMAR 26.11.09.08J – Requirements for Industrial Furnaces and Other Miscellaneous Installations that Cause Emissions of NO_x. “A person who owns or operates any installation other than fuel-burning equipment that causes NO_x emissions shall:

- 1) Maintain good operating practices as recommended by the equipment vendor to minimize emissions;
- 2) Prepare and implement a written in-house training program for all operators of these installations that include instruction on good operating and maintenance practices for the particular installation;
- 3) Maintain and make available to the Department, upon request, the written in-house operator training program;
- 4) Burn only gas in each installation, where gas is available, during the period May 1 through September 30 of each year; and
- 5) Maintain operator training attendance records for each operator at the site for at least 2 years and make these records available to the Department upon request.”

Compliance Demonstration

The Permittee shall maintain good operating practices as recommended by the equipment vendor to minimize NO_x emissions. [Reference: **COMAR 26.11.09.08J(1)**]. The Permittee shall prepare and implement a written in-house training program for all operators of these installations that include instruction on good operating and maintenance practices for the particular installation. (Note: COMAR 26.11.09.08B(5)(a) states that “for the purpose of this regulation, the equipment operator to be trained may be the person who maintains the equipment and makes the necessary adjustments for efficient operation.” The Permittee shall maintain the written in-house operator-training program and operator training attendance records for each operator at the site for at least 2 years. The Permittee shall make available to the Department, upon request, the written in-house operator-training program and records of operator training attendance. [Reference: **COMAR 26.11.09.08J(2)**].

E. Operational Limit

- (a) Each compartment of the **Blast Furnace** baghouse must be equipped with a differential pressure gauge. [Reference: **MDE PTC #03-6-0939 M, Part B(2) issued 1/14/1999**]
- (b) A fabric-filter leak-detection system that must be equipped with an alarm, recorder, or equivalent method approved by MDE. [Reference: **MDE PTC #03-6-0939 M, Part B(3) issued 1/14/1999**]
- (c) The Permittee shall maintain on the premises sufficient quantity of replacement bags (544 bags minimum) to rebag once cell of the cast house baghouse. [Reference: **MDE PTC 03-6-0939M, Part C(3) issued 1/14/1999**] –

Compliance Demonstration

- (a) The Permittee shall measure the pressure drop across each compartment at least once per shift to ensure that it remains within the appropriate range or within manufacturers' specification. [Reference: **MDE PTC 03-6-0939M, Part D(5) issued 10/1/2003**] The Permittee shall maintain records of daily pressure drop monitoring on site for at least five years and make available to the Department upon request. [Reference: **MDE PTC 03-6-0939 M, Part D(5), issued 10/1/2003 & COMAR 26.11.03.06C**].

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- (b) None.
- (c) The Permittee shall keep an inventory of the number of replacement bags available for use. The Permittee shall also inspect the inventory records at least once each week to ensure that the number of replacement bags available is sufficient (544 bags minimum). If during the inspection it is found that there is insufficient number of replacement bags, the Permittee must take adequate steps to ensure that orders for new replacement bags are placed and they are procured within 24 to 48 hours. [Reference: MDE PTC 03-6-0939M, Part C(3)] The Permittee shall maintain current inventory records onsite that indicates the number of replacement bags available for use. [Reference: COMAR 26.11.03.06C]
-

Emissions Unit – L Blast Furnace [6-0939] Cont'd

MACT Requirements

BFBFFB: Blast Furnace with Baghouse for Casting Emissions (BFBFFB).
BFBFCH: Cast House

40 CFR Part 63 Subpart FFFFF – National Emission Standards for Hazardous Air Pollutants: Integrated Iron and Steel Manufacturing.

Applicability

§63.7781 – “Each owner or operator of an affected source at an integrated iron and steel manufacturing facility that is (or is part of) a major source of HAP emissions must comply with this final rule.”

§63.7782 – Parts of the plant covered

(a) This subpart applies to each new and existing affected source at an integrated iron and steel manufacturing facility.

(b) The affected sources are each new or existing sinter plant, **blast furnace**, and basic oxygen process furnace (BOPF) shop at an integrated iron and steel manufacturing facility.

(c) This subpart covers emissions from the sinter plant windbox exhaust, discharge end, and sinter cooler; the **blast furnace cast house**; and the BOPF shop including each individual BOPF and shop ancillary operations (hot metal transfer, hot metal desulfurization, slag skimming, and ladle metallurgy).

(d) The sinter plant, **blast furnace**, or BOPF shop at your integrated iron and steel manufacturing facility exists if you commenced construction or reconstruction of the affected source before July 13, 2001.

§63.7783 – Compliance Dates

(a) If you have an existing affected source, the Permittee must comply with each emission limitation and operation and maintenance requirement in this subpart that applies to the Permittee no later than May 22, 2006.

(e) You must meet the notification and schedule requirements in Sec. 63.7840. Several of these notifications must be submitted before the compliance date for your affected source.

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Applicable Standards/Limits:

Control of Visible Emissions (Opacity) and Particulate Matter

§63.7790(a) – Emission and Opacity Limits

(a) The Permittee must meet each emission limit and opacity limit in Table 1 [of this MACT] to this subpart that applies.

For:

7. Each cast house at an existing blast furnace

- a. You must not cause to be discharged to the atmosphere any gases that exit from a control devices that contain **particulate matter** in excess of 0.01 gr/dscf; and
- b. You must not cause to be discharged to the atmosphere any secondary emissions that exit any opening in the **cast house** or structure housing the blast furnace that exhibit **opacity** greater than 20 percent (6-minute average).

§63.7810 - General Compliance Requirements

- (a) You must be in compliance with the emission limitations and operation and maintenance requirements in this subpart at all times, except during periods of startup, shutdown, and malfunction as defined in Sec. 63.2.
- (b) During the period between the compliance date specified for your affected source in Sec. 63.7783 and the date upon which continuous monitoring systems have been installed and certified and any applicable operating limits have been set, you must maintain a log detailing the operation and maintenance of the process and emissions control equipment.
- (c) You must develop and implement a written startup, shutdown, and malfunction plan according to the provisions in Sec. 63.6(e)(3).

Operational Standards

§63.7790(b) – Operating Limits

- (b) You must meet each operating limit for capture systems and control devices in paragraphs (b)(1) through (3) of this section that applies to you.
 - (1) You must operate each capture system applied to emissions from a sinter plant discharge end or **blast furnace cast house** or to secondary emissions from a BOPF at or above the lowest value or settings established for the operating limits in your operation and maintenance plan;
- (c) An owner or operator who uses an air pollution control device other than a **baghouse**, venturi scrubber, or electrostatic precipitator must comply in accordance with requirements provided in §63.7790 (c) of this subpart.

§63.7800(a) – Operation and Maintenance Requirements

- (a) As required by Sec. 63.6(e)(1)(i), you must always operate and maintain your affected source, including air pollution control and monitoring equipment, in a manner consistent with good air pollution control practices for minimizing emissions at least to the levels required by this subpart.
- (b) You must prepare and operate at all times according to a written operation and maintenance plan for each capture system or control device subject to an operating limit in Sec. 63.7790(b). Each plan must address the elements in paragraphs (b)(1) through (5) of this section.

Compliance Demonstration

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§63.7820 - Initial Compliance Requirements

The Permittee must conduct a performance test to demonstrate initial compliance with each emission and **opacity limit** in Table 1 of this subpart that applies. The Permittee must conduct the performance tests within 180 calendar days after the compliance date that is specified in §63.7783 for the affected source and report the results in the notification of compliance status.

§63.7821 - The Permittee must conduct subsequent performance test to demonstrate compliance with all applicable **PM and opacity limits** in Table to the subpart no less frequently than **twice (at mid term and renewal)** during each term of the Title V operating permit.

§63.7822 – §63.7826. All applicable performance tests and compliance demonstrations must be conducted in accordance with the test methods as provided in §63.7822, §63.7823, and §63.7824. The Permittee must comply with the requirements in §63.7825 and §63.7826 to demonstrate initial compliance with applicable emission limitations and with the operation and maintenance requirements that apply respectively.

§63.7830 – Continuous Compliance Monitoring

(a) For each capture system subject to an operating limit in Sec. 63.7790(b)(1) established in your capture system operation and maintenance plan, you must install, operate, and maintain a CPMS according to the requirements in Sec. 63.7831(e) and the requirements in paragraphs (a)(1) through (3) of this section.

(1) Dampers that are manually set and remain in the same position are exempt from the requirement to install and operate CPMS. If dampers are not manually set and remain in the same position, you must make a visual check at least once every 24 hours to verify that each damper for the capture system is in the same position as during the initial performance test.

(2) If you use a flow measurement device to monitor the operating limit parameter for a sinter plant discharge end or **blast furnace cast house**, you must monitor the hourly average rate (e.g. the hourly average actual volumetric flow rate through each separately ducted hood, the average hourly total volumetric flow rate at the inlet to the control device) according to the requirements in §63.7832.

(3) If you use a flow measurement device to monitor the operating limit parameter for a capture system applied to secondary emissions from a BOPF, you must monitor the average rate for each steel production cycle (e.g., the average actual volumetric flow rate through each separately ducted hood for each steel production cycle, the average total volumetric flow rate at the inlet to the control device for each steel production cycle) according to the requirements in §63.7832.

(b) For each baghouse applied to meet any particulate emission limit in Table 1 of this subpart, you must install, operate, and maintain a bag leak detection system according to Sec. 63.7831(f), monitor the relative change in particulate matter loadings according to the requirements in Sec. 63.7832, and conduct inspections at their specified frequencies according to the requirements in paragraphs (b)(1) through (8) of this section.

(1) Monitor the pressure drop across each baghouse cell each day to ensure pressure drop is within the normal operating range identified in the manual.

(2) Confirm that dust is being removed from hoppers through weekly visual inspections or other means of ensuring the proper functioning of removal mechanisms.

(3) Check the compressed air supply for pulsejet baghouses each day.

(4) Monitor cleaning cycles to ensure proper operation using an appropriate methodology.

(5) Check bag cleaning mechanisms for proper functioning through monthly visual inspection or equivalent means.

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(6) Make monthly visual checks of bag tension on reverse air and shaker-type baghouses to ensure that bags are not kinked (kneaded or bent) or laying on their sides. You do not have to make this check for shaker-type baghouses using self-tensioning (spring-loaded) devices.

(7) Confirm the physical integrity of the baghouse through quarterly visual inspections of the baghouse interior for air leaks.

(8) Inspect fans for wear, material buildup, and corrosion through quarterly visual inspections, vibration detectors, or equivalent means.

§63.7833 – Compliance demonstration with applicable emission limitations

(a) You must demonstrate continuous compliance for each affected source subject to an emission or opacity limit in Sec. 63.7790(a) by meeting the requirements in Table 3 [of this MACT] to this subpart.

(b) You must demonstrate continuous compliance for each capture system subject to an operating limit in Sec. 63.7790(b)(1) by meeting the requirements in paragraphs (b)(1) and (2) of this section.

(1) Operate the capture system at or above the lowest values or settings established for the operating limits in your operation and maintenance plan; and

(2) Monitor the capture system according to the requirements in Sec 63.7830(a) and collect, and record the monitoring data for each of the operating limit parameters according to the applicable requirements of this subpart.

(c) For each baghouse applied to meet any particulate emission limit in Table 1 to this subpart, you must demonstrate continuous compliance by completing the requirements in paragraphs (c)(1) and (2) of this section.

1) Maintaining records of the time you initiated corrective action in the event of a bag leak detection system alarm, the corrective actions(s) taken, and the date on which corrective action was completed.

(2) Inspecting and maintaining each baghouse according to the requirements in Sec. 63.7831(f) and recording all information needed to document conformance with these requirements. If you increase or decrease the sensitivity of the bag leak detection system beyond the limits specified in Sec. 63.7831(f)(6), you must include a copy of the required written certification by a responsible official in the next semiannual compliance report.

§63.7840 – Records to be Maintained

(a) You must keep the following records:

(1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any initial notification or notification of compliance status that you submitted, according to the requirements in Sec. 63.10(b)(2)(xiv).

(2) The records in Sec. 63.6(e)(3)(iii) through (v) related to startup, shutdown, and malfunction.

(3) Records of performance tests, performance evaluations, and opacity observations as required in Sec. 63.10(b)(2)(viii)

(c) You must keep the records required in Sec. 63.6(h)(6) for visual observations.

(d) You must keep the records required in Sec. Sec. 63.7833 and 63.7834 to show continuous compliance with each emission limitation and operation and maintenance requirement that applies to you.

§63.7843 - Other Record keeping Requirements

(a) Your records must be in a form suitable and readily available for expeditious review, according to Sec. 63.10(b)(1).

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(b) As specified in Sec. 63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

(c) You must keep each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record according to Sec. 63.10(b)(1). You can keep the records offsite for the remaining 3 years.

§63.7840 – Notification Requirements

(a) You must submit all of the notifications in Sec. Sec. 63.6(h)(4) and (5), 63.7(b) and (c), 63.8(e) and (f)(4), and 63.9(b) through (h) that apply to you by the specified dates.

(b) As specified in Sec. 63.9(b)(2), if you startup your affected source before May 20, 2003, you must submit your initial notification no later than September 17, 2003.

(d) If you are required to conduct a performance test, you must submit a notification of intent to conduct a performance test at least 60 calendar days before the performance test is scheduled to begin as required in Sec. 63.7(b)(1).

(e) If you are required to conduct a performance test, opacity observation, or other initial compliance demonstration, you must submit a notification of compliance status according to Sec. 63.9(h)(2)(ii).

(1) For each initial compliance demonstration that does not include a performance test, you must submit the notification of compliance status before the close of business on the 30th calendar day following completion of the initial compliance demonstration.

(2) For each initial compliance demonstration that does include a performance test, you must submit the notification of compliance status, including the performance test results, before the close of business on the 60th calendar day following the completion of the performance test according to Sec. 63.10(d)(2).

§63.7841 - Reporting Requirements

(a) Compliance report due dates. Unless the Administrator has approved a different schedule, you must submit a semiannual compliance report to your permitting authority according to the requirements in paragraphs (a)(1) through (5) of this section.

(b) Compliance report contents. Each compliance report must include the information in paragraphs (b)(1) through (3) of this section and, as applicable, paragraphs (b)(4) through (8) of this section.

(c) Immediate startup, shutdown, and malfunction report. If you had a startup, shutdown, or malfunction during the semiannual reporting period that was not consistent with your startup, shutdown, and malfunction plan, you must submit an immediate startup, shutdown, and malfunction report according to the requirements in Sec. 63.10(d)(5)(ii).

(d) Part 70 monitoring report. If you have obtained a title V operating permit for an affected source pursuant to 40 CFR part 70 or 71, you must report all deviations as defined in this subpart in the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A). If you submit a compliance report for an affected source along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), and the compliance report includes all the required information concerning deviations from any emission limitation or operation and maintenance requirement in this subpart, submission of the compliance report satisfies any obligation to report the same deviations in the semiannual monitoring report. However, submission of a compliance report does not otherwise affect any obligation you may have to report deviations from permit requirements for an affected source to your permitting authority.

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Emissions Unit: Beaching.[6-2582]

BLFLBLFHMDPF: No. 3 Mold Yard. [6-02582]. Emissions are vented to three hoods and carbon dioxide suppression system. (Permit to construct issued 5/2/2000).

APPLICABLE STANDARDS/LIMITS

A. Control of Particulate Matter

COMAR 26.11.10.04B(1) – Particulate Matter Fugitive Emissions

“A person may not cause or permit the discharge of fugitive emissions of particulate matter from an iron and steel production installation unless reasonable control methods are employed to minimize emissions. These methods include the use of hoods and control equipment to capture emissions, other control techniques, and process restrictions.”

Compliance Demonstration

The Permittee shall prepare and maintain a plan that contains an explanation of the reasonable precautions that will be used to prevent particulate matter from becoming airborne. Once a month and on windy days [wind speed greater than ???], the Permittee shall perform an inspection of the operations to verify that the reasonable precautions are being implemented. The Permittee shall reevaluate the effectiveness of the reasonable precautions plan once per year. The Permittee shall maintain the plan of reasonable precautions and keep records of dates and results of visual observations. These records shall be kept on site for a period of at least five years. The Permittee shall submit the plan and records of visual observations to the Department upon request [**Reference: COMAR 26.11.03.06C**].

B. Operational Limit

- 1) When beaching hot metal in the #3 Mold Yard building, emissions shall be controlled by injecting carbon dioxide into a hooded containment structure located in the building. [**Reference: MDE PTC 03-6-2582M, Part(C)(2) issued 5/2/2000**] The Permittee shall not beach hot metal in the #3 Mold Yard building without the carbon dioxide suppression system in operation. [**Reference: MDE PTC 03-6-2582M, Part(C)(3), issued 5/2/2000**].
- 2) The Permittee shall maintain the physical integrity of the #3 Mold Yard building to ensure that emissions associated with the beaching of hot metal shall be contained in the building. In the event of damage to the building and until such time as the damage is repaired, the Permittee shall take all reasonable precautions to minimize the amount of hot metal beached including full utilization of available pigging operation and the throttling back on the Blast Furnace operation. [**Reference: MDE PTC 03-6-2582M, Part (C)(5), issued 5/2/2000**]
- 3) The Permittee cannot beach more than 1,000 tons per day and more than 80,000 tons per year of hot metal in the #3 Mold Yard building during normal operations. This condition does not apply during startup and shutdown of the Blast Furnace for a major outage or for any emergency event that has compelled the Division to idle the Blast Furnace. [**Reference: MDE PTC 03-6-2582M, Part(C)(4), issued 5/2/2000**]

Compliance Demonstration

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- 1) The Permittee shall report any deviations in the normal operation of the carbon dioxide suppression system to the Department. This includes shutdowns, malfunctions, repairs, or other changes to normal routine operations that would likely cause an increase in emissions from the No. 3 Mold Yard. **[Reference: COMAR 26.11.03.06C]**
 - 2) The Permittee shall make weekly inspections of the #3 Mold Yard building to check for leaks. All leaks shall be repaired within one week of discovery. **[Reference MDE PTC 03-6-2582M, Part(C)(7), issued 5/2/2000]** The Permittee shall keep records of building maintenance and damage repair, cleaning, building inspections, and malfunctions (including explosions) and make these records available to the Department upon request. **[Reference: MDE PTC 03-6-2582M, Part(D)(2), issued 5/2/2000].**
The Permittee shall maintain a log of each kish inspection and record corrective action taken, if any, to reduce kish accumulations. Records of kish inspections and corrective actions must be maintained onsite for 5 years and must be made available to the Department upon request. **[Reference: MDE PTC 03-6-2582M, Part(C)(6), issued 5/2/2000].**
 - 3) The Permittee shall inspect the No. 3 Mold Yard building for accumulation of kish after each 5,000 tons of hot metal beached. If accumulation of kish is found, or at the request of the Department, the building shall be vacuum cleaned within 48 hours of the inspection or the request. **[Reference: MDE PTC 03-6-2582M, Part(C)(6), issued 5/2/2000]** The Permittee shall keep daily records of tons of hot metal beached at the #3 Mold Yard building. **[Reference MDE PTC 03-6-2582M, Part(D)(1), issued 5/2/2000]** The Permittee shall report the tons of hot metal beached to the Department in annual the Emissions Certification Report. **[Reference: MDE PTC 03-6-2582M, Part(D)(1), issued 5/2/2000]** The Permittee must also report to the Department the amounts of hot metal beached that exceeds the normal operational permitted levels as provided in MDE PTC 03-6-2582M, Part(C)(4)
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Emission Unit – Basic Oxygen Furnace (BOF) Shop [6-0943]

SMBOFRP: Hot Metal Reladling Pit with Baghouse (**SMBOFRPB**)

SMBOFERP: Hot Metal Emergency Reladling Pit equipped with natural gas suppression control.

SMBOFDSB – Desulfurization station with baghouse.

SMBOFDSSB – Reagent silo with baghouse [9-0950].

SMBOBOF: BOF Charging, Refining, Tapping, Slag Handling with BOF scrubbers (4) (**SMBOFBOFS**) and BOF Roof Monitor (fugitive emissions) (**SMBOBBOF**)

SMBOFLM: BOF Ladle Metallurgy includes baghouse.

SMBOFMB: BOF Raw Material Handling with Baghouse

SMBOFTHB: BOF Raw Material Handling with Baghouse (Track hopper)

SMBOFCD: Two (2) Cover Drying Stations [insignificant activity].

SMBOFLD: Six (6) Ladle Drying Stations [insignificant activity].

SMBOFSSB: Slag Skimming Station with Baghouse.

The BOF produces steel by charging scrap steel, hot metal and flux materials into a vessel and introducing a high volume of an oxygen rich gas. The Sparrows Point Plant has two vessels each averaging 280-ton heats. Only one vessel can be blowing oxygen at any given time due to the limiting supply of oxygen gas.

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Hot metal from the blast furnace is delivered to the BOF shop in rail cars called "subs". The hot metal in the subs is emptied into a ladle in a process called "hot metal reladling". During the reladling process, emissions are collected and vented through a baghouse. Emissions that are not captured by the collection system are vented into the BOF shop building then out the shop's roof monitor. The reladling process includes a permanent reladling pit and an emergency-reladling pit. The majority of the hot metal reladling is done in the permanent pit. The emergency pit is used when the permanent pit is down for cleaning or maintenance. Emissions from the emergency pit are controlled by natural gas flame-suppression system vented into the BOF Shop building.

The hot metal from the reladling process is then transferred either to the desulfurization station or is fed directly to the BOF vessel. In the desulfurization process, the ladle containing the hot metal is positioned under a hood, and a lance is immersed in the hot metal. A reagent is then fed to the hot metal. Fumes generated by the reaction of the hot metal are captured by a hood and ducted through a baghouse. Hot metal from the desulfurization station is then transferred to the slag skimming station, which is equipped with a baghouse for controlling particulate emissions. Slag generated during the desulfurization process is removed from the top of the ladle by raking it into a slag bowl or sometimes called a "kish bowl".

APPLICABLE STANDARDS/LIMITS

A. Control of Visible Emissions

For Slag Skimming Station with Baghouse only:

(1) §60.142a(a) - Standards for Particulate Matter. "Except as provided under paragraph (b) and (c) of this section, on and after the date on which the performance test under 60.8 is required to be completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility any secondary emissions that: **(3) Exit from a control device used solely for the collection of secondary emissions from a top-blown BOPF or from hot metal transfer or skimming for a top-blown or a bottom-blown BOPF and exhibit more than 5 percent opacity**"

(2) COMAR 26.11.10.03A(1) – Visible Emissions

"A person may not cause or permit the discharge of emissions from any installation, other than water in an uncombined form, which is visible to human observers."

COMAR 26.11.10.03A(2) – Exceptions. "Section A(1) of this regulation does not apply to the following: (e) Confined emissions resulting from start-ups, process modifications or adjustments, or occasional cleaning of control equipment if: (i) The visible emissions are not greater than 40 percent opacity; and (ii) The visible emissions do not occur for more than 6 consecutive minutes in any 60 minute period."

(3) COMAR 26.11.10.03B(5) - Visible Emissions from Certain Installations

"After complying with the requirements of Regulation .04B of this chapter, a person may not cause or permit the discharge of visible fugitive emissions into the outdoor atmosphere, other than water in an uncombined form, which is greater than the following specified visible emission standards: **(5) Basic oxygen furnace shop building: 15 percent opacity from the basic oxygen furnace shop roof monitor based on a 3-observation rolling**

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arithmetic average of the opacity records recorded on each of 3 calendar days of observation.”

COMAR 26.11.10.03(C) - 15 Percent Standard.

- (1) “The provision described in §B(5) of this regulation is referred to as the 15 percent standard. The first exceedance of the 15 percent standard during each calendar year, from January 1 through December 31, does not constitute a violation of the 15 percent standard. The second exceedance and all subsequent exceedances of the 15 percent standard during the calendar year are prohibited.”
- (2) “Any source subject to §B(5) of this regulation shall, at a minimum, schedule one observation on each of the three different calendar days per calendar week, and perform the observations on the days scheduled, unless weather or other conditions on one or more of those days prevent observations to be made in accordance with Method 9.”
- (3) “If weather or other conditions prevent Method 9 observation from being made, a person shall perform the missing observation or observations during that week or in the following 2 calendar weeks in addition to the minimum three observations required for each calendar week, unless prevented by weather or other conditions.”

Additional Opacity requirements see MACT requirements – Table 5a.

Compliance Demonstration

(1) & (2) **For Baghouses (Reladling, Slag skimming station, desulfurization) and Scrubbers.** The Permittee shall perform once a week 6-minute visual observation of the baghouses exhaust. The visual observation must be conducted while the baghouses are in operation. If visible emissions are observed during any observation, the Permittee must conduct an 18-minute test of opacity in accordance with EPA Method 9. The EPA Method 9 test must begin within 24-hour of any observation of visible emissions. **[Reference: COMAR 26.11.03.06C]**

(3) The Permittee shall hire an independent contractor to perform visible emissions observations on the **BOF roof monitor**.

Each observation shall be performed for one hour utilizing EPA Reference Method 9 (Visual Determination of Opacity of Emissions from Stationary Sources – 40 CFR Ch. 1, Part 60, App. A), except for the sentence within paragraph 2.4 of Method 9 setting the minimum number of 24 observations to be recorded and the data reduction provisions in paragraph 2.5 of Method 9. The “opacity record” of each observation is determined as the highest average of any 6 consecutive minutes of readings. Prior to making an “opacity record” calculation, the three highest minutes from the 60-minute observation may be removed in 1, 2, or 3-minute groups. After removing these minutes, the remaining minutes of readings are treated as if they were consecutive when calculating an “opacity record.”

For each calendar day on which more than one valid observation is performed, and therefore more than one “opacity record” is established, the highest “opacity record” of that calendar day shall be the only one utilized in a determination of compliance.

The Permittee shall, at a minimum schedule one observation on each of three (3) different calendar days per calendar week, and shall perform the observations on the days scheduled, unless weather or other conditions on one or more of those days prevent observations in compliance with Method 9. In that event, the Permittee shall perform the missing observation(s) during that week or in the following two (2) calendar weeks in addition to the minimum 3 observations required for each calendar week, unless

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weather or other conditions prevent such observation(s) in compliance with EPA Method 9. Should MDE or EPA perform an observation or observations, each such observation shall be deemed to be in lieu of an observation required to be performed by the Permittee, on a one-for-one basis. The Permittee shall maintain the required opacity records required in §B(5) of COMAR 26.11.10.03B(5) including a summary of each calendar day observation's "opacity record" and the 3-observation rolling arithmetic average of the "opacity record". The Permittee shall submit to the Department, no later than the thirtieth (30th) of the month following each calendar quarter, a report which contains the following records: records required in Part C3(c); records required in Part C6(d) including a summary of each calendar day observation's "opacity record" and the 3-observation rolling arithmetic average of the "opacity record" [Reference: COMAR 26.11.03.06C]

B. Control of Particulate Matter

For Slag Skimming Station with Baghouse only

§60.142a(a) - Standards for Particulate Matter. "Except as provided under paragraph (b) and (c) of this section, on and after the date on which the performance test under 60.8 is required to be completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility any secondary emissions that: (2) Exit from a control device used solely for the collection of secondary emissions from a top-blown BOPF or from hot metal transfer or skimming for a top-blown or a bottom-blown BOPF and contain particulate matter in excess of **23 mg/dscm (0.010 gr/dscf).**"

For Scrubber system, baghouses (reladling, slag skimming & desulfurization)

COMAR 26.11.10.04A – Particulate Matter

"A person may not cause or permit the discharge of confined emissions of particulate matter in excess of 0.03 gr/scfd (68.7 mg/dscm) from any iron or steel production installation".

COMAR 26.11.10.04B(1) – Particulate Matter Fugitive Emissions

"A person may not cause or permit the discharge of fugitive emissions of particulate matter from an iron and steel production installation unless reasonable control methods are employed to minimize emissions. These methods include the use of hoods and control equipment to capture emissions, other control techniques, and process restrictions"

COMAR 26.11.10.04B(2) - Reasonable Control Methods Required to Satisfy §B(1) of this Regulation.

"Reasonable control methods required to satisfy §B(1) of this regulation are listed below for the installation specified, grouped by major buildings or structures. No other control methods are required for those buildings, structures, or installations. The reasonable control methods are:

(c) Basic oxygen furnace shop building:

- (i) Hot metal reladling - hoods and control equipment on the normal hot metal pit and flame suppression on the emergency pit,
- (ii) Oxygen lance hole - suppression maintained on all furnace oxygen lance openings;
- (iii) Furnace charging, refining, and tapping - use of a primary hood and control equipment with good operating practices and regular maintenance of all system components and ductwork."

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Additional particulate matter requirements see MACT requirements – Table 5a.

Compliance Demonstration

For Slag Skimming Station only: The Permittee shall install, calibrate, operate, and maintain a monitoring device that continually measures and records for each steel production cycle the various rates or levels of exhaust ventilation at each phase of the cycle through each duct of the secondary emission capture system. The monitoring device or devices are to be placed at locations near each capture point of the secondary emission capture system to monitor the exhaust ventilation rates or levels adequately, or in alternative locations approved in advance by the Department. **[Reference §60.143a(a)-Monitoring Requirements]**

For Scrubbers and baghouses – See MACT requirements in Table 5a for TMRR compliance demonstration.

C. Control of VOC Emissions

COMAR 26.11.10.06E(1) – Control of VOC Emissions from Miscellaneous Production Installations.

“A person who owns or operates a **basic oxygen furnace** or a blast furnace shall:

- (1) Develop and maintain a good management practices plan for each installation;
- (2) By January 1, 2002, implement the good management practices plan to reduce VOC emissions; and
- (3) Make the plan available to the Department upon request.”

Compliance Demonstration

The Permittee shall prepare, implement and revise as necessary, good management practices plan for each Basic Oxygen Furnace installation to reduce VOC emissions. The Permittee shall maintain written or printable electronic copies of all good management practices plan for each Basic Oxygen Furnace installation to reduce VOC emissions. The Permittee shall make available to the Department upon request copies of good management practices plan for each Basic Oxygen furnace installation for VOC emission reduction **[Reference: COMAR 26.11.03.06C]**

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D. Control of NO_x Emissions

For SMBOFCD1-2 & SMBOFLD1-6 only

COMAR 26.11.09.08J – Requirements for Industrial Furnaces and Other Miscellaneous Installations that Cause Emissions of NO_x. “A person who owns or operates any installation other than fuel-burning equipment that causes NO_x emissions shall:

- 1) Maintain good operating practices as recommended by the equipment vendor to minimize emissions;
- 2) Prepare and implement a written in-house training program for all operators of these installations that include instruction on good operating and maintenance practices for the particular installation;
- 3) Maintain and make available to the Department, upon request, the written in-house operator training program;
- 4) Burn only gas in each installation, where gas is available, during the period May 1 through September 30 of each year; and
- 5) Maintain operator training attendance records for each operator at the site for at least 2 years and make these records available to the Department upon request.”

Compliance Demonstration

The Permittee shall maintain good operating practices as recommended by the equipment vendor to minimize NO_x emission. [Reference: **COMAR 26.11.09.08J(1)**]. The Permittee shall prepare and implement a written in-house training program for all operators of these installations that include instruction on good operating and maintenance practices for the particular installation. (Note: COMAR 26.11.09.08B(5)(a) states that “for the purpose of this regulation, the equipment operator to be trained may be the person who maintains the equipment and makes the necessary adjustments for efficient operations. The Permittee shall maintain the written in-house operator-training program and operator training attendance records for each operator at the site for at least 2 years. The Permittee shall make available to the Department, upon request, the written in-house operator-training program and records of the operator training attendance. [Reference: **COMAR 26.11.09.08J(2)**]

Emissions Unit – BOF Shop Cont’d

SMBOFRP: Hot Metal Relading Pit with Baghouse (SMBOFRPB).

SMBOBOF: BOF Charging, Refining, Tapping, Slag Handling with BOF scrubbers (SMBOFBOFS) and BOF Roof Monitor (SMBOFBOF).

SMBOFLM: BOF Ladle Metallurgy includes baghouse.

SMBOFSSB: Slag Skimming Station with Baghouse.

40 CFR Part 63, Subpart FFFFF: *National Emission Standards for Hazardous Air Pollutants: Integrated Iron and Steel Manufacturing*

Applicability

§63.7781 – “Each owner or operator of an affected source at an integrated iron and steel manufacturing facility that is (or is part of) a major source of HAP emissions must comply with this

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final rule.”

§63.7782 – Parts of the plant covered

(a) This subpart applies to each new and existing affected source at an integrated iron and steel manufacturing facility.

(b) The affected sources are each new or existing sinter plant, blast furnace, and **basic oxygen process furnace (BOPF) shop** at an integrated iron and steel manufacturing facility.

(c) This subpart covers emissions from the sinter plant windbox exhaust, discharge end, and sinter cooler; the blast furnace cast house; and the **BOPF shop including each individual BOPF and shop ancillary operations (hot metal transfer, hot metal desulfurization, slag skimming, and ladle metallurgy)**.

(d) The sinter plant, blast furnace, or **BOPF shop** at your integrated iron and steel manufacturing facility exists if you commenced construction or reconstruction of the affected source before July 13, 2001.

§63.7783 – Compliance Dates

(a) If you have an existing affected source, the Permittee must comply with each emission limitation and operation and maintenance requirement in this subpart that applies to the Permittee no later than May 22, 2006.

(e) You must meet the notification and schedule requirements in Sec. 63.7840. Several of these notifications must be submitted before the compliance date for your affected source.

Applicable Standards/Limits:

Control of Visible Emissions (Opacity) and Particulate Matter

§63.7790(a) – Emission and Opacity Limits

(a) The Permittee must meet each emission limit and opacity limit in Table 1 [of this MACT] to this subpart that applies.

For:

9. Each BOPF at a new or existing shop

a. You must not cause to be discharged to the atmosphere any gases that exit from a primary emission control system for a BOPF with a closed hood system at a new or existing BOPF shop that contain, on a flow-weighted basis, particulate matter in excess of 0.03 gr/dscf during the primary oxygen blow ².

b. You must not cause to be discharged to the atmosphere any gases that exit from a primary emission control system for a BOPF with an open hood system that contain, on a flow-weighted basis, particulate matter in excess of 0.02 gr/dscf during the steel production cycle for an existing BOPF shop or 0.01 gr/dscf during the steel production cycle for a new BOPF shop²; and

c. You must not cause to be discharged to the atmosphere any gases that exit from a control device used solely for the collection of secondary emissions from the BOPF that contain particulate matter in excess of 0.01 gr/dscf for an existing BOPF shop or 0.0052 gr/dscf for a new BOPF shop.

10. Each hot metal transfer, skimming, and desulfurization operation at a new or existing BOPF shop - You must not cause to be discharged to the atmosphere any gases that exit from a control device that contain particulate matter in excess of 0.01 gr/dscf for an existing BOPF shop or 0.003 gr/dscf for a new BOPF shop.

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11. ***Each ladle metallurgy operation at a new or existing BOPF shop***- You must not cause to be discharged to the atmosphere any gases that exit from a control device that contain particulate matter in excess of 0.01 gr/dscf for an existing BOPF shop or 0.004 gr/dscf for a new BOPF shop.
12. ***Each roof monitoring at an existing BOPF shop*** - You must not cause to be discharged to the atmosphere any secondary emissions that exit any opening in the BOPF shop or any other building housing the BOPF or BOPF shop operation that exhibit opacity greater than 20 percent (3-minute average).

Note:

² This limit applies to control devices operated in parallel for a single BOPF during the oxygen blow.

§63.7810 - General Compliance Requirements

- (a) You must be in compliance with the emission limitations and operation and maintenance requirements in this subpart at all times, except during periods of startup, shutdown, and malfunction as defined in Sec. 63.2.
- (b) During the period between the compliance date specified for your affected source in Sec. 63.7783 and the date upon which continuous monitoring systems have been installed and certified and any applicable operating limits have been set, you must maintain a log detailing the operation and maintenance of the process and emissions control equipment.
- (c) You must develop and implement a written startup, shutdown, and malfunction plan according to the provisions in Sec. 63.6(e)(3).

Operational Standards

§63.7790(b) – Operating Limits

- (b) You must meet each operating limit for capture systems and control devices in paragraphs (b)(1) through (3) of this section that applies to you.
- (1) You must operate each capture system applied to emissions from a sinter plant discharge end or blast furnace cast house or **to secondary emissions from a BOPF** at or above the lowest value or settings established for the operating limits in your operation and maintenance plan;
- (2) For each venturi scrubber applied to meet any particulate emission limit in Table 1 to this subpart, you must maintain the hourly average pressure drop and scrubber water flow rate at or above the minimum levels established during the initial performance test.
- (3) For each electrostatic precipitator applied to emissions from a **BOPF**, you must maintain the average opacity of emissions for each 6- minute period at or below the site-specific opacity value corresponding to the 99 percent upper confidence limit on the mean of a normal distribution of average opacity values established during the initial performance test.
- (c) An owner or operator who uses an air pollution control device other than a baghouse, venturi scrubber, or electrostatic precipitator must comply in accordance with requirements provided in §63.7790 (c) of this subpart.

§63.7800(a) – Operation and Maintenance Requirements

- (a) As required by Sec. 63.6(e)(1)(i), you must always operate and maintain your affected source,

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including air pollution control and monitoring equipment, in a manner consistent with good air pollution control practices for minimizing emissions at least to the levels required by this subpart. (b) You must prepare and operate at all times according to a written operation and maintenance plan for each capture system or control device subject to an operating limit in Sec. 63.7790(b). Each plan must address the elements in paragraphs (b)(1) through (5) of this section.

Compliance Demonstration

§63.7820 - Initial Compliance Requirements

The Permittee must conduct a performance test to demonstrate initial compliance with each emission and **opacity limit** in Table 1 of this subpart that applies. The Permittee must conduct the performance tests within 180 calendar days after the compliance date that is specified in §63.7783 for the affected source and report the results in the notification of compliance status.

§63.7821 - The Permittee must conduct subsequent performance test to demonstrate compliance with all applicable **PM and opacity limits** in Table to the subpart no less frequently than **twice (at mid term and renewal)** during each term of the Title V operating permit.

§63.7822 – §63.7826. All applicable performance tests and compliance demonstrations must be conducted in accordance with the test methods as provided in §63.7822, §63.7823, and §63.7824. The Permittee must comply with the requirements in §63.7825 and §63.7826 to demonstrate initial compliance with applicable emission limitations and with the operation and maintenance requirements that apply respectively.

§63.7830 – Continuous Compliance Monitoring

(a) For each capture system subject to an operating limit in Sec. 63.7790(b)(1) established in your capture system operation and maintenance plan, you must install, operate, and maintain a CPMS according to the requirements in Sec. 63.7831(e) and the requirements in paragraphs (a)(1) through (3) of this section.

(1) Dampers that are manually set and remain in the same position are exempt from the requirement to install and operate CPMS. If dampers are not manually set and remain in the same position, you must make a visual check at least once every 24 hours to verify that each damper for the capture system is in the same position as during the initial performance test.

(2) If you use a flow measurement device to monitor the operating limit parameter for a sinter plant discharge end or blast furnace cast house, you must monitor the hourly average rate (e.g. the hourly average actual volumetric flow rate through each separately ducted hood, the average hourly total volumetric flow rate at the inlet to the control device) according to the requirements in §63.7832.

(3) If you use a flow measurement device to monitor the operating limit parameter for a capture system applied to **secondary emissions from a BOPF**, you must monitor the average rate for each steel production cycle (e.g., the average actual volumetric flow rate through each separately ducted hood for each steel production cycle, the average total volumetric flow rate at the inlet to the control device for each steel production cycle) according to the requirements in §63.7832.

(b) For each baghouse applied to meet any particulate emission limit in Table 1 of this subpart, you must install, operate, and maintain a bag leak detection system according to Sec. 63.7831(f), monitor the relative change in particulate matter loadings according to the requirements in Sec. 63.7832, and conduct inspections at their specified frequencies according to the requirements in paragraphs (b)(1) through (8) of this section.

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- (1) Monitor the pressure drop across each baghouse cell each day to ensure pressure drop is within the normal operating range identified in the manual.
 - (2) Confirm that dust is being removed from hoppers through weekly visual inspections or other means of ensuring the proper functioning of removal mechanisms.
 - (3) Check the compressed air supply for pulsejet baghouses each day.
 - (4) Monitor cleaning cycles to ensure proper operation using an appropriate methodology.
 - (5) Check bag cleaning mechanisms for proper functioning through monthly visual inspection or equivalent means.
 - (6) Make monthly visual checks of bag tension on reverse air and shaker-type baghouses to ensure that bags are not kinked (kneaded or bent) or laying on their sides. You do not have to make this check for shaker-type baghouses using self-tensioning (spring-loaded) devices.
 - (7) Confirm the physical integrity of the baghouse through quarterly visual inspections of the baghouse interior for air leaks.
 - (8) Inspect fans for wear, material buildup, and corrosion through quarterly visual inspections, vibration detectors, or equivalent means.
 - (c) For each venturi scrubber subject to the operating limits for pressure drop and scrubber water flow rate in Sec. 63.7790(b)(2), you must install, operate, and maintain CPMS according to the requirements in Sec. 63.7831(g) and monitor the hourly average pressure drop and water flow rate according to the requirements in Sec. 63.7832.
- Sec. 63.7790(b)(2), - For each venturi scrubber applied to meet any particulate emission limit in Table 1, Subpart FFFFF, part 63, you must maintain the hourly average pressure drop and scrubber water flow rate at or above the minimum levels established during the initial performance test.**

§63.7833 – Compliance demonstration with applicable emission limitations

- (a) You must demonstrate continuous compliance for each affected source subject to an emission or opacity limit in Sec. 63.7790(a) by meeting the requirements in Table 3 to this subpart.
- (b) You must demonstrate continuous compliance for each capture system subject to an operating limit in Sec. 63.7790(b)(1) by meeting the requirements in paragraphs (b)(1) and (2) of this section.
 - (1) Operate the capture system at or above the lowest values or settings established for the operating limits in your operation and maintenance plan;
 - (2) Monitor the capture system according to the requirements in Sec. 63.7830(a) and collect, reduce, and record the monitoring data for each of the operating limit parameters according to the applicable requirements of this subpart;
- (c) For each baghouse applied to meet any particulate emission limit in Table 1 to this subpart, you must demonstrate continuous compliance by completing the requirements in paragraphs (c)(1) and (2) of this section.
 - (1) Maintaining records of the time you initiated corrective action in the event of a bag leak detection system alarm, the corrective actions(s) taken, and the date on which corrective action was completed.
 - (2) Inspecting and maintaining each baghouse according to the requirements in Sec. 63.7831(f) and recording all information needed to document conformance with these requirements. If you increase or decrease the sensitivity of the bag leak detection system beyond the limits specified in Sec. 63.7831(f)(6), you must include a copy of the required written certification by a

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responsible official in the next semiannual compliance report.

(d) For each venturi scrubber subject to the operating limits for pressure drop and scrubber water flow rate in Sec. 63.7790(b)(2), you must demonstrate continuous compliance by completing the requirements of paragraphs (d)(1) through (3) of this section.

(1) Maintaining the hourly average pressure drop and scrubber water flow rate at levels no lower than those established during the initial or subsequent performance test;

(2) Operating and maintaining each venturi scrubber CPMS according to Sec. 63.7831(g) and recording all information needed to document conformance with these requirements; and

(3) Collecting and reducing monitoring data for pressure drop and scrubber water flow rate according to Sec. 63.7831(b) and recording all information needed to document conformance with these requirements.

§63.7840 – Records to be Maintained

(a) You must keep the following records:

(1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any initial notification or notification of compliance status that you submitted, according to the requirements in Sec. 63.10(b)(2)(xiv).

(2) The records in Sec. 63.6(e)(3)(iii) through (v) related to startup, shutdown, and malfunction.

(3) Records of performance tests, performance evaluations, and opacity observations as required in Sec. 63.10(b)(2)(viii)

(b) For each COMS, you must keep the records specified in paragraphs (b)(1) through (4) of this section.

(1) Records described in Sec. 63.10(b)(2)(vi) through (xi).

(2) Monitoring data for a performance evaluation as required in Sec. 63.6(h)(7)(i) and (ii).

(3) Previous (that is, superseded) versions of the performance evaluation plan as required in Sec. 63.8(d)(3).

(4) Records of the date and time that each deviation started and stopped, and whether the deviation occurred during a period of startup, shutdown, or malfunction or during another period.

(c) You must keep the records required in Sec. 63.6(h)(6) for visual observations.

(d) You must keep the records required in Sec. Sec. 63.7833 and 63.7834 to show continuous compliance with each emission limitation and operation and maintenance requirement that applies to you.

§63.7843 - Other Record keeping Requirements

(a) Your records must be in a form suitable and readily available for expeditious review, according to Sec. 63.10(b)(1).

(b) As specified in Sec. 63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

(c) You must keep each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record according to Sec. 63.10(b)(1). You can keep the records offsite for the remaining 3 years.

§63.7840 – Notification Requirements

(a) You must submit all of the notifications in Sec. Sec. 63.6(h)(4) and (5), 63.7(b) and (c), 63.8(e) and (f)(4), and 63.9(b) through (h) that apply to you by the specified dates.

(b) As specified in Sec. 63.9(b)(2), if you startup your affected source before May 20, 2003, you must submit your initial notification no later than September 17, 2003.

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(d) If you are required to conduct a performance test, you must submit a notification of intent to conduct a performance test at least 60 calendar days before the performance test is scheduled to begin as required in Sec. 63.7(b)(1).

(e) If you are required to conduct a performance test, opacity observation, or other initial compliance demonstration, you must submit a notification of compliance status according to Sec. 63.9(h)(2)(ii).

(1) For each initial compliance demonstration that does not include a performance test, you must submit the notification of compliance status before the close of business on the 30th calendar day following completion of the initial compliance demonstration.

(2) For each initial compliance demonstration that does include a performance test, you must submit the notification of compliance status, including the performance test results, before the close of business on the 60th calendar day following the completion of the performance test according to Sec. 63.10(d)(2).

§63.7841 - Reporting Requirements

(a) Compliance report due dates. Unless the Administrator has approved a different schedule, you must submit a semiannual compliance report to your permitting authority according to the requirements in paragraphs (a)(1) through (5) of this section.

(b) Compliance report contents. Each compliance report must include the information in paragraphs (b)(1) through (3) of this section and, as applicable, paragraphs (b)(4) through (8) of this section.

(c) Immediate startup, shutdown, and malfunction report. If you had a startup, shutdown, or malfunction during the semiannual reporting period that was not consistent with your startup, shutdown, and malfunction plan, you must submit an immediate startup, shutdown, and malfunction report according to the requirements in Sec. 63.10(d)(5)(ii).

(d) Part 70 monitoring report. If you have obtained a title V operating permit for an affected source pursuant to 40 CFR part 70 or 71, you must report all deviations as defined in this subpart in the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A). If you submit a compliance report for an affected source along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), and the compliance report includes all the required information concerning deviations from any emission limitation or operation and maintenance requirement in this subpart, submission of the compliance report satisfies any obligation to report the same deviations in the semiannual monitoring report. However, submission of a compliance report does not otherwise affect any obligation you may have to report deviations from permit requirements for an affected source to your permitting authority.

Emission Unit – Continuous Caster [6-0943]

Continuous caster consisting of:

- 1) **SMCCLMB**: Castor Ladle Metallurgy Bins with Baghouse (SMCCLMBH).
- 2) Slab Caster with (2) Cooling Water Stack Vent #1 **SCCCW1** & Stack Vent #2 **SCCCW2**.
- 3) **PMPS**: Slitting.

SMCCTD: Tundish Drying. [Insignificant activity]

SMCCNSP: Tundish Nozzle Shroud Preheating. [Insignificant activity]

SMCCTP: Tundish Preheating. [Insignificant activity]

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APPLICABLE STANDARDS/LIMITS

A. Control of Visible Emissions

For Baghouse only

COMAR 26.11.10.03A(1) – Visible Emissions

“A person may not cause or permit the discharge of confined emissions from any installation, other than water in an uncombined form, which is visible to human observers.”

COMAR 26.11.10.03A(2) – Exceptions. “Sections A(1) of this regulation does not apply to the following: (e) Confined emissions resulting from start-ups, process modifications or adjustments, or occasional cleaning of control equipment if: (i) The visible emissions are not greater than 40 percent opacity; and (ii) The visible emissions do not occur for more than 6 consecutive minutes in any 60 minute period.”

Compliance Demonstration

The Permittee shall visually inspect the exhaust gases from all control equipment (baghouse) stack for visible emissions once a week for an 18-minute period and shall record the results of each observation. If no visible emissions are observed in six consecutive months for the exhaust stack of any emission unit, the Permittee may decrease the frequency of visual inspection from once weekly to once monthly for the exhaust stack of that emission unit. If visible emissions are observed during any monthly visual inspection, the Permittee must resume visible inspection of the exhaust stack of that emission unit once a week basis and maintain that schedule until no visible emissions are observed in six consecutive months. If no visible emissions are observed during the once a month visible inspection for the exhaust stack of any emission unit, the Permittee may decrease the frequency of visual inspection from monthly to semi-annually for the exhaust stack of that emission unit. If visible emissions are observed during any semi-annual visible inspection, the Permittee must resume visible inspection of the exhaust stack of that emission unit on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly inspections. The Permittee shall maintain on site a log of the dates and results of visible emissions observations for a period of at least five years. The Permittee shall report incidents of visible emissions in accordance with permit condition 4, Section III, Plant Wide Conditions, “Report of Excess Emissions and Deviations.” The Permittee shall also make the records of visual emission inspections available to the Department upon request. **[Reference: COMAR 26.11.03.06C].**

B. Control of Particulate Matter

For baghouse only

COMAR 26.11.10.04A – Confined Emissions

“A person may not cause or permit the discharge of confined emissions of particulate matter in excess of 0.03 gr/scfd (68.7 mg/dscm) from any iron or steel production installation.”

For slitting operation only

COMAR 26.11.10.04B(1) – Particulate Matter Fugitive Emissions

“A person may not cause or permit the discharge of fugitive emissions of particulate matter from an iron and steel production installation unless reasonable control methods are employed to minimize emissions. These methods include the use of hoods and control equipment to capture emissions, other control techniques, and process restrictions”

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Compliance Demonstration

For Baghouse: The Permittee shall develop and maintain a preventive maintenance plan for the baghouse that describes the maintenance activity and time schedule for completing each activity. The Permittee shall perform maintenance activities within the time frames established in the plan and shall maintain a log with records of the dates and description of the maintenance that was performed. The Permittee shall maintain a copy of the preventive maintenance plan and a record of the dates of and description of maintenance activity performed. The Permittee shall maintain records of the baghouse malfunctions and the corrective actions taken to bring into proper operation. The Permittee shall submit the maintenance plan and records of maintenance activities to the Department upon request **[Reference: COMAR 26.11.03.06C]**

For Slitting Operation: The Permittee shall prepare and maintain a plan that contains an explanation of the reasonable precautions that will be used to prevent particulate matter from becoming airborne. Once a month, the Permittee shall perform an inspection of the operations to verify that the reasonable precautions are being implemented. The Permittee shall reevaluate the effectiveness of the reasonable precautions plan annually. The Permittee shall maintain the plan of reasonable precautions and keep records of dates and results of visual observation of the operations. These records shall be kept on site for a period of at least five years. The Permittee shall submit the plan and records of visual observation of the operations to the Department upon request **[Reference: COMAR 26.11.03.06C]**.

C. Control of VOC Emissions

COMAR 26.11.10.06D – Control of VOC Emissions for Continuous Casters.

“A person who owns or operates a continuous caster shall skim oil and grease from the cooling water at the continuous caster waste water treatment facility.”

Compliance Demonstration

The Permittee shall record the dates and times during which the oil and grease are skimmed from the cooling water at the continuous casters. The Permittee shall make available to the Department upon request the record of the dates and times during which the oil and grease are skimmed at the cooling water at the continuous caster.

[Reference: COMAR 26.11.03.06C]

D. Operational Limit

Continuous (Wide) Caster

For the purpose of establishing an emission baseline relative to the contemporaneous period for emissions, the combined caster (#1 & #2) design capacity is considered to be 4.3 million tons per year of slab produced (calculated on a 12-month rolling basis) and the emissions associated with this capacity are considered to be:

<u>Pollutant</u>	<u>Emissions Limits (tons per year)</u>
PM ₁₀	28
VOC	16
NO _x	5
CO	2
SO ₂	1

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Any exceedance of these emission levels requires the Permittee to reassess, within 30 days of the exceedance, whether any applicable PSD/NSR thresholds have been exceeded and to submit documentation associated with the reassessment to the Department. **[Reference: MDE PTC 03 6-0943M, Part C(1), issued 1/31/2003].**

Compliance Demonstration

The Permittee shall maintain monthly records of steel slab production on a 12-month rolling period from the Caster Shop. **[Reference: MDE PTC number 6-0943M, Part D(1), issued 1/31/2003].** The Permittee shall report to the Department the monthly records of steel slab production from the caster shop on a quarterly basis. The Permittee shall begin submitting quarterly reports by the 30th day following the end of each calendar quarter. The reports shall confirm that the combined emissions from the Caster Shop do not exceed specified limits calculated over a rolling 12-month period. **[Reference: MDE PTC number 6-0943M, Part D(2), issued 1/31/2003].**

Emission Units – Slab Conditioning.

HSMSS56: 56" Slab conditioning

5 slab slitting machines

1 group of 24 slab cutting torches and 1 group of 8 scarfing torches located at the shipment Prep Yard in the Old Plate Mill.

HSMSS68: 68" Slab Conditioning [6-2219].

APPLICABLE STANDARDS/LIMITS

A. Control of Particulate Matter

COMAR 26.11.10.04B(1) – Particulate Matter Fugitive Emissions

"A person may not cause or permit the discharge of fugitive emissions of particulate matter from an iron and steel production installation unless reasonable control methods are employed to minimize emissions. These methods include the use of hoods and control equipment to capture emissions, other control techniques, and process restrictions."

Compliance Demonstration

The Permittee shall prepare and maintain a plan that contains an explanation of the reasonable precautions that will be used to prevent particulate matter from becoming airborne. Once a month, the Permittee shall perform an inspection of the operations to verify that the reasonable precautions are being implemented. The Permittee shall reevaluate the effectiveness of the reasonable precautions plan annually. For Slitting Operation: The Permittee shall maintain the plan of reasonable precautions and keep records of dates and results of visual observation of the operations. These records shall be kept on site for a period of at least five years. The Permittee shall submit the plan and records of visual observation of the operations to the Department upon request **[Reference: COMAR 26.11.03.06C].**

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B. Operational Limit

The Permittee shall not allow the slab slitting operation to process more than 1,000,000 tons of slab per year without first obtaining approval from the Department [Reference: MDE 03-6-2589N, Part C(3), issued May 17, 2000].

Compliance Demonstration

The Permittee shall record the annual throughput of cut slabs, & weekly scavenging of dross and maintain such records onsite for at least 5 years and make them available to the Department upon request. [Reference: MDE Permit Condition Part C(3) of Permit No. 03-6-2589N, MDE Permit Condition 7 of Permit No. 03-6-2207N, and MDE Permit Condition 7 of the Permit Number 03-6-2219N].

For SMCCSS45x90 – Slab Slitting 45x90 only: The Permittee shall record the annual throughput of cut slabs and the weekly scavenging of dross and melted steel and keep such records on site for at least 5 years and make them available to the Department upon request. [Reference: MDE Permit 03-6-2589N, Part C(4), issued May 17, 2000].

The Permittee shall keep annual records on site of the throughput of cut slabs for at least five years and make them available to the Department upon request. [Reference: MDE Permit #03-6-2760 N, Part D(1), issued 11/12/2003].

Emission Units – Hot Strip Mill [6-0947]

HSMFAB: Hot Strip Mill A&B Reheat Furnace. [Burns natural gas and No. 6 fuel oil]

HSMCT: Hot Strip Mill Contact Water Cooling Tower. [Insignificant activity]

HSMRM: Hot Strip Mill Rolling Mill.

HSMMSH: Mill Scale Handling. [Insignificant activity]

The 68" Hot Strip Mill (HSM) processes steel slabs from the continuous caster into finished band. The mill was originally built in 1947 and then was modernized in 1989. Part of the modernization involved the installation of two new reheat furnaces that can be fired on natural gas and/or No. 6 fuel oil, with on specification used oil. The furnace normally burns natural gas but can be interrupted by the utility company and forced to burn oil. The furnace also burns oil whenever the price of the oil is cheaper than that of natural gas.

The new reheat furnaces began operating in March of 1990 burning natural gas. There were no visible emissions associated with the burning of the natural gas. In 1992 & 1993, the furnaces began burning No. 6 fuel oil for the first time, which resulted in visible emission problems. Combustion consultants were contracted to correct the visible emissions and to perform emission tests while burning No. 6 fuel oil at varying sulfur content levels to determine its affects on the stack emissions. The problem was corrected and the new reheat furnaces now operate in compliance with the visible emission standard while burn natural gas, No. 6 fuel oil and a combination of natural gas and No. 6 fuel oil. ISG has decided to stop burning oil in the furnace because of the difficulty with visible emissions and hasn't burned oil for several years. ISG is actually thinking about removing all of the oil handling equipment and tanks.

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Steel slabs (about 9 tons on average) are charged into the furnaces from a roller line. There are two (2) furnaces (A & B), each with eight (8) heating zones. The slabs travel first through the preheat zones (zones 1 & 2), which are heated by exhaust gases from the main heating zones of the furnace. After the preheating zones, the slab enters the first of two heating zones (zones 3, 4, 5, & 6). The heating zones are usually fired on natural gas but can be fired on No. 6 fuel oil. The slabs exit the heating zones and enter the last two zones of the furnace known as the soaking zones. In the soaking zones, the slabs reach a uniform temperature of approximately 2200°F. Processing the slabs through all the heating zones (zones 1 through 8) takes approximately two and a half (2 ½) hours and the furnace reaches temperatures as high as 2400°F.

The facility can process between 300 and 400 tons of steel slabs per hour per furnace. The waste combusted gases from the two furnaces are discharged into a common stack then released to the atmosphere.

After the slabs are heated they are sent to the finish mills where they are rolled into bands. The rolling process consists of a reversing-roughing mill, scale breaker, roughing mill, coiler, decoiler, and a group of six finishing mills. The scale breaker used high-pressure water to remove the iron oxides scale from the slab. The roughing mill and reverser mills roll the slabs into steel strips of the proper gauge and length. The strips are then water cooled and coiled into bands for sale or further processing within the plant.

Wastewater generated from the descaling operation is fed to the scale pits. Scale from the pits is reclaimed and transferred to the sinter plant bedding plant for reuse. Dirty scale, usually the smaller size scale pieces are sent to the landfill. Wastewater from the pits is transferred to a contact-water cooling tower and returned to the mill for reuse. Overflow wastewater is sent to Humphrey's Creek WWTP.

The following table summarizes the actual emissions from the facility as reported in their annual Emission Certification Report (ECR):

Data Year	Production Tons	NO _x TPY	SO _x TPY	PM ₁₀ TPY	CO TPY	VOC TPY
2000	2,947,996	758	1	10	26	10
2001	2,725,074	821	1	10	28	11
2002	2,534,152	689	1	9	23	9

Applicable Standards/Limits:

A. Control of Visible Emissions

For Reheat Furnaces only

COMAR 26.11.10.03A(1) – Visible Emissions

“A person may not cause or permit the discharge of confined emissions from any installation, other than water in an uncombined form, which is visible to human observers.”

COMAR 26.11.10.03A(2) – Exceptions. “Sections A(1) of this regulation does not apply to the following:

(e) Confined emissions resulting from start-ups, process modifications or adjustments, or occasional

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cleaning of control equipment if: (i) The visible emissions are not greater than 40 percent opacity; and (ii) The visible emissions do not occur for more than 6 consecutive minutes in any 60 minute period."

Compliance Demonstration

When burning natural gas in the reheat furnaces no visible observation required. When burning No. 6 fuel oil, the Permittee shall conduct an EPA Method 9 observation once a month for a 6-minute period on the furnace stack to demonstrate compliance with visible emission limit. The Permittee shall maintain a log of the dates and results of the EPA Method 9 observations on site for at least five years and make available to the Department upon request. [Reference: **COMAR 26.11.03.06C**].

B. Control of Particulate Matter

For Reheat Furnaces only

COMAR 26.11.10.04A – Confined Emissions

"A person may not cause or permit the discharge of confined emissions of particulate matter in excess of 0.03 gr/scfd (68.7 mg/dscm) from any iron or steel production installation."

For Hot Strip rolling mill only

COMAR 26.11.10.04B(1) – Particulate Matter Fugitive Emissions

"A person may not cause or permit the discharge of fugitive emissions of particulate matter from an iron and steel production installation unless reasonable control methods are employed to minimize emissions. These methods include the use of hoods and control equipment to capture emissions, other control techniques, and process restrictions"

Compliance Demonstration

For Reheat Furnace: The Permittee shall develop and maintain a preventive maintenance plan for the furnace that describes the maintenance activity and time schedule for completing each activity. The Permittee shall perform maintenance activities within the time frames established in the plan and shall maintain a log with records of the dates and description of the maintenance that was performed. The Permittee shall maintain a copy of the preventive maintenance plan and a record of the dates of and description of maintenance activity performed. The Permittee shall maintain records of the baghouse malfunctions and the corrective actions taken to bring into proper operation. The Permittee shall submit the maintenance plan and records of maintenance activities to the Department upon request [Reference: **COMAR 26.11.03.06C**]

For Hot Strip Rolling Mill: The Permittee shall prepare and maintain a plan that contains an explanation of the reasonable precautions that will be used to prevent particulate matter from becoming airborne. Once a month, the Permittee shall perform an inspection of the operations to verify that the reasonable precautions are being implemented. The Permittee shall reevaluate the effectiveness of the reasonable precautions plan annually. The Permittee shall maintain the plan of reasonable precautions and keep records of dates and results of visual observation of the operations. These records shall be kept on site for a period of at least five years. The Permittee shall submit the plan and records of visual observation of the operations to the Department upon request [Reference: **COMAR 26.11.03.06C**].

C. Control of VOC Emissions

For Hot Strip Rolling Mill (HSMRM) only

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COMAR 26.11.10.06(B) - Control of VOC Emissions from Installations That Use Rolling Oils or Rust Preventive Oils

"The following installations may not use oils or rust preventive oils that have a vapor pressure greater than 1 millimeter of mercury at 25 Celsius: (1) Hot rolling operations."

Compliance Demonstration

For HSMRM only: The Permittee shall keep MSDS or other data sheets, that indicates the vapor pressure of the rolling oils and rust preventative oils that are used at the hot rolling mill. These records shall be kept on site for at least five (5) years and shall be made available to the Department upon request. **[Reference: COMAR 26.11.03.06C].**

D. Control of NO_x Emissions

For Reheat Furnaces only

COMAR 26.11.09.08J – Requirements for Industrial Furnaces and Other Miscellaneous Installations that Cause Emissions of NO_x. "A person who owns or operates any installation other than fuel-burning equipment that causes NO_x emissions shall:

- 1) Maintain good operating practices as recommended by the equipment vendor to minimize emissions;
- 2) Prepare and implement a written in-house training program for all operators of these installations that include instruction on good operating and maintenance practices for the particular installation;
- 3) Maintain and make available to the Department, upon request, the written in-house operator training program;
- 4) Burn only gas in each installation, where gas is available, during the period May 1 through September 30 of each year; and
- 5) Maintain operator training attendance records for each operator at the site for at least 2 years and make these records available to the Department upon request."

Compliance Demonstration

The Permittee shall maintain good operating practices as recommended by the equipment vendor to minimize NO_x emissions; **[Reference: COMAR 26.11.09.08J(1)]**. The Permittee shall prepare and implement a written in-house training program for all operators of these installations that include instruction on good operating and maintenance practices for the particular installation. (Note: COMAR 26.11.0.08B(5)(a) states that " for the purpose of this regulation the equipment operator trained may be the person who maintains the equipment and makes the necessary adjustments for efficient operations." The Permittee shall maintain written in-house operator training and operator training attendance records for each operator at the site for at least two years. The Permittee shall make available to the Department upon request, the written in-house operator-training program and records of operator training attendance. **[Reference: COMAR 26.11.09.08J(2)]**

Emission Units: Coating Lines

Coated Products Group.

No. 1 Coating (Galvanize) line [6-0948] consisting of the following:

- Annealing Gas Preheater (**CSM1GPH**)
- Selas Reheat Furnace (**CSM1GSF**).

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Melt Pot (CSM1GMPT)

Oiler. (CSM1GMH)

Steam Wiper. (CSM1GSW)

Passivation. (CSM1GCP)

No. 2 Coating (Galvanize) Line [6-0948] consisting of the following:

Galvanneal Furnace. (CSM2GGH)

Selas Reheat Furnace. (CSM2GSF)

Steam Superheater. (CSM2GSS)

Melt Pot. (CSM2GMPT)

Oiler. (CSM2GMH)

Steam Dryer. (CSM2GSS)

Steam Wiper. (CSM2GSW)

No.3 Coating (Galvalume/Galvanize) Line [6-0948] consisting of the following:

Selas Reheat Furnace. CSM3GGH

Strip Preheater. CSM3GPH

Melt Pot. (CSM3GMPT)

Oiler (CSM3GMH)

Roll coater and caustic washer (CSM3GRC)

No. 4 Coating (Hot Dip) line [6-1732] consisting of the following:

Strip Melt Pot. CSM4HDMPT

Strip Preheater/Annealing Furnace. CSM4HDAF

Roll coater (CSM4HDRC)

Oiler. (CSM4HDEO)

Alkaline cleaning tank/cleaner storage (CSM4HDAC) with scrubber

No. 1 Coating (Galvanize) Line: No. 1 Galvanize line process involves heat treating chemical treatment, and coating with molten zinc. Prepared coils from the Tandem Mill are delivered to the coating lines in coil form. The sheet is first uncoiled before entering the direct-fired natural-gas furnace (Selas Furnace) for annealing. Residual oil and fines on the surface of the sheet steel is burned in the process. After the strips are annealed in the Selas Furnaces, each strip passes through electrically heated holding furnace, which serves as a soaking operation. The sheet then passes through a molten-metal coating bath. From the coating path, the coated strip passes through a wiper to control coating thickness and then is cooled. Depending on the end use of the strip, a chrome oxide layer may be applied in a chrome passivation process to prevent oxidation. The strip then is dried, and depending on end use, may be oiled for downstream processing and prevention of oxidation. After chemical treatment, the strips either are shipped off the site or are transferred to either the No.2 or the No.3 Skin Pass Mill.

No.2 Coating (Galvanize) Line: The No.2 Galvanize Line applies a zinc coating to a heat-treated and prepared coil from the Cold Sheet Mill. The strip is uncoiled and prepared by annealing then heat soaking prior to coating with molten zinc. From the coating bath, the coated strip passes through an air wiper or a steam wiper to control coating thickness and then cooled. The strip is then passed through another annealing furnace before it is cooled, leveled and conveyed to a chemical-treatment area where the strip is passivated with dichromate solution. The strip is dried and oiled then coiled and packaged for shipment.

No. 3 Coating (Galvalume/Galvanize) Line: The No.3 Galvanize Line applies a zinc/aluminum coating to

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a heat-treated and prepared coil from the Cold Sheet Mill. Preparation consists of strip caustic cleaning, preheating and annealing then heat soaking prior to coating with molten zinc/aluminum. From the coating bath, the coated strip passes through an air wiper or steam wiper to control coating thickness. The strip is then cooled, leveled and conveyed to a chemical-treatment area where the strip is coated with acrylic or passivated with dichromate solution. The strip is then dried, oiled and coiled and packaged for shipment.

The No. 4 Coating (Hot Dip) Line: The No.4 Hot Dip Coating Line can make either galvanized and galvalume product. Coils from the 56" and 66" Tandem Mills are transferred to the No.4 Hot Dip Coating Line where it is uncoiled, caustically cleaned to remove fines and oils, and annealed in a furnace. The sheet is then coated with a mixture of liquid aluminum/zinc alloy or liquid zinc. Air knives control the coating thickness by removing excess coating from the strip. The coated strip is then cooled and quenched. The strip may be chemically treated with dichromate solution. An electrically heated hot-air dryer is used immediately after passivation. The strip is then oiled and recoiled for shipment off site.

Applicable Standards/Limits:

For Scrubber, super heaters, and reheat furnace only

A. Control of Visible Emissions

COMAR 26.11.10.03A(1) – Visible Emissions

"A person may not cause or permit the discharge of confined emissions from any installation, other than water in an uncombined form, which is visible to human observers."

COMAR 26.11.10.03A(2) – Exceptions. "Sections A(1) of this regulation does not apply to the following: (e) Confined emissions resulting from start-ups, process modifications or adjustments, or occasional cleaning of control equipment if: (i) The visible emissions are not greater than 40 percent opacity; and (ii) The visible emissions do not occur for more than 6 consecutive minutes in any 60 minute period."

Compliance Demonstration

The Permittee shall visually inspect the exhaust gases from all control equipment [scrubber, furnace, super heaters] stack for visible emissions once a week for an 18-minute period and shall record the results of each observation. If no visible emissions are observed in six consecutive months for the exhaust stack of any emission unit, the Permittee may decrease the frequency of visual inspection from once weekly to once monthly for the exhaust stack of that emission unit. If visible emissions are observed during any monthly visual inspection, the Permittee must resume visible inspection of the exhaust stack of that emission unit once a week basis and maintain that schedule until no visible emissions are observed in six consecutive months. If no visible emissions are observed during the once a month visible inspection for the exhaust stack of any emission unit, the Permittee may decrease the frequency of visual inspection from monthly to semi-annually for the exhaust stack of that emission unit. If visible emissions are observed during any semi-annual visible inspection, the Permittee must resume visible inspection of the exhaust stack of that emission unit on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly inspections. The Permittee shall maintain on site a log of the dates and results of visible emissions observations for a period of at least five years. The Permittee shall report incidents of visible emissions in accordance with permit condition 4, Section III, Plant Wide Conditions, "Report of Excess Emissions and Deviations." The Permittee shall also make the records available to the Department upon request. **[Reference: COMAR 26.11.03.06C]**

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B. Control of Particulate Matter

For Scrubber, super heaters, and reheat furnace only

COMAR 26.11.10.04A – Confined Emissions

“A person may not cause or permit the discharge of confined emissions of particulate matter in excess of 0.03 gr/scfd (68.7 mg/dscm) from any iron or steel production installation.”

For Oilers, Melt Pots, roll coaters only

COMAR 26.11.10.04B(1) – Particulate Matter Fugitive Emissions

“A person may not cause or permit the discharge of fugitive emissions of particulate matter from an iron and steel production installation unless reasonable control methods are employed to minimize emissions. These methods include the use of hoods and control equipment to capture emissions, other control techniques, and process restrictions”

Compliance Demonstration

For Scrubber, super heaters, and reheat furnace only: The Permittee shall develop and maintain a preventive maintenance plan for the scrubber, super heaters and reheat furnace that describes the maintenance activity and time schedule for completing each activity. The Permittee shall perform maintenance activities within the time frames established in the plan and shall maintain a log with records of the dates and description of the maintenance that was performed. The Permittee shall maintain a copy of the preventive maintenance plan and a record of the dates of and description of maintenance activity performed. The Permittee shall maintain records of the baghouse malfunctions and the corrective actions taken to bring into proper operation. The Permittee shall submit the maintenance plan and records of maintenance activities to the Department upon request **[Reference: COMAR 26.11.03.06C]**

For Oilers, Melt Pots, roll coaters only: The Permittee shall prepare and maintain a plan that contains an explanation of the reasonable precautions that will be used to prevent particulate matter from becoming airborne. Once a month, the Permittee shall perform an inspection of the operations to verify that the reasonable precautions are being implemented. The Permittee shall reevaluate the effectiveness of the reasonable precautions plan annually. The Permittee shall maintain the plan of reasonable precautions and keep records of dates and results of visual observation of the operations. These records shall be kept on site for a period of at least five years. The Permittee shall submit the plan and records of visual observation of the operations to the Department upon request. **[Reference: COMAR 26.11.03.06C].**

C. Control of VOC Emissions

COMAR 26.11.10.06(B) - Control of VOC Emissions from Installations That Use Rolling Oils or Rust Preventive Oils

“The following installations may not use oils or rust preventive oils that have a vapor pressure greater than 1 millimeter of mercury at 25 Celsius: (1) Hot rolling operations.”

COMAR 26.11.19.05(B) – Coil Coating. Emission Standards “A person may not cause or permit the discharge into the atmosphere of any VOC from coil coating in excess of 2.6 pounds per gallon of coating applied (minus water) (0.31 kilogram/liter of coating applied (minus water)).”

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For No. 3 Coating (Galvalume) Line Roll Coater [6-0948] and No. 4 Coating (Hot Dip) Line Roll Coater [6-1732] only

40 CFR Part 60 Subpart TT – New Source Performance Standards for Metal Coil Surface Coating

§60.460 - Applicability and designation of affected facility.

(a) The provisions of this subpart apply to the following affected facilities in a metal coil surface coating operation: each prime coat operation, each finish coat operation, and each prime and finish coat operation combined when the finish coat is applied wet on wet over the prime coat and both coatings are cured simultaneously.

(b) This subpart applies to any facility identified in paragraph (a) of this section that commences construction, modification, or reconstruction after January 5, 1981.

§60.462(a)(1) - Standards for VOCs

“(a) On and after the date on which §60.8 requires a performance test to be completed, each owner or operator subject to this subpart shall not cause to be discharged into the atmosphere more than: (1) 0.28 kilogram VOC per liter (kg VOC/l) of coating solids applied for each calendar month for each affected facility that does not use an emission control device(s)”

Compliance Demonstration

The Permittee shall conduct an initial VOC performance test as required under 40 CFR 60.8(a) and thereafter a performance test for each calendar month for the metal roll coating operation according to the procedures in the 40 CFR 60.463-Performance test. **[Reference MDE PTC 03-6-1732M, Part (E)(3)]**

The Permittee shall conduct an initial VOC performance test as required under 40 CFR 60.8(a) and thereafter a performance test for each calendar month for the metal roll coating operation according to the procedures in the 40 CFR 60.463-Performance test. **[Reference MDE PTC 03-6-1732M, Part (E)(3)]**

§ 60.463(c)(1) - Performance test and compliance provisions

(c) The owner or operator shall use the following procedures for determining monthly volume-weighted average emissions of VOCs in kg/l of coating solids applied.

(1) An owner or operator shall use the following procedures for each affected facility that does not use a capture system and control device to comply with the emission limit specified under §60.462(a)(1). The owner or operator shall determine the composition of the coatings by formulation data supplied by the manufacturer of the coating or by an analysis of each coating, as received, using Method 24. The Administrator may require the owner or operator who uses formulation data supplied by the manufacturer of the coatings to determine the VOC content of coatings using Method 24 or an equivalent or alternative method. The owner or operator shall determine the volume of coating and the mass of VOC-solvent added to coatings from company records on a monthly basis. If a common coating distribution system serves more than one affected facility or serves both affected and existing facilities, the owner or operator shall estimate the volume of coating used at each affected facility by using the average dry weight of coating and the surface area coated by each affected and existing facility or by other procedures acceptable to the Administrator.

§60.466 – Test methods and procedures:

(a) The reference methods in appendix A to this part, except as provided under §60.8(b), shall be used to determine compliance with §60.462 as follows: (1) Reference Method 24, or data provided by the formulator of the coating for determining the VOC content of each coating as applied to the surface of the metal coil. In the event of a dispute, Reference Method 24 shall be the reference

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method. When VOC content of waterborne coatings, determined by the Reference Method 24, is used to determine compliance of affected facilities, the results of the Reference Method 24 analysis shall be adjusted as described in section 4.4 of Reference Method 24.

(b) For Method 24, the coating sample must be at least a 1-liter sample taken at a point where the sample will be representative of the coating as applied to the surface of the metal coil."

§60.464(a) - Monitoring of emissions and operations

"(a) Where compliance with the numerical limit specified in §60.462(a) (1) or (2) is achieved through the use of low VOC-content coatings without the use of emission control devices or through the use of higher VOC-content coatings in conjunction with emission control devices, the owner or operator shall compute and record the average VOC content of coatings applied during each calendar month for each affected facility, according to the equations provided in §60.463."

The Permittee shall keep MSDS or other data sheets, that indicates the vapor pressure of the rolling oils and rust preventative oils that are used at the hot rolling mill. These records shall be kept on site for at least five (5) years and shall be made available to the Department upon request. **[Reference: COMAR 26.11.03.06C].**

The Permittee shall: compute and record the average VOC content of coatings applied during each calendar month for the metal roll coating operation according to the equations provided in 40 CFR 60.463; **[Reference: MDE PTC 03-6-0948M, Part (D)(3) and MDE PTC 03-6-1732M, Part (F)(3)]** and maintain at the site, for a period of five (5) years, records of all data and calculations used to determine monthly VOC emissions from the metal roll coating operation and to determine the monthly emission limit found in Part B(20) or Part B(1)(a)(i) of the permit. **[Reference: MDE PTC 03-6-0948M, Part (D)(5) and MDE PTC 03-6-1732M, Part (F)(5)]**

§60.465(e) - Record keeping requirements

"(e) Each owner or operator subject to the provisions of this subpart shall maintain at the source, for a period of at least 2 years, records of all data and calculations used to determine monthly VOC emissions from each affected facility and to determine the monthly emission limit, where applicable."

The Permittee shall, following the initial performance test, identify, record, and submit a written report to the Department every calendar quarter of each instance in which the volume-weighted average of the local mass of VOCs emitted to the atmosphere per volume of applied coating solids (N) is greater than the limit specified under 40 CFR 60.462. If no such instances have occurred during a particular quarter, a report stating this shall be submitted to the Department annually. **[Reference MDE PTC 03-6-0948M, Part (D)(4) and MDE PTC 03-6-1732M, Part (F)(4)]**

For No. 4 Hot Dip Coating Line Roll Coater (Emission Unit CSM4HDRC)

§60.465 - Reporting requirements

"(c) Following the initial performance test, the owner or operator of an affected facility shall identify, record, and submit a written report to the Administrator every calendar quarter of each instance in which the volume-weighted average of the local mass of VOCs emitted to the atmosphere per volume of applied coating solids (N) is greater than the limit specified under § 60.462. If no such instances have occurred during a particular quarter, a report stating this shall be submitted to the Administrator semiannually."

D. Operational Limit

For the No. 4 Hot Dip Coating Line Roll Coater (Emission Unit CSM4HDRC) only

(1) The alkali-cleaning unit shall be equipped with a packed bed scrubber that has a monitor and recorder

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to continuously monitor and record the flow rate of the scrubbing solution when the alkali-cleaning unit is in operation.). **[Reference: MDE PTC 03-6-1732M, Section C(3), issued 4/12/2001]**

- (2) The Permittee is prohibited from operating the alkali-cleaning unit unless the packed bed scrubber is on-line and operating properly. The flow rate of the scrubbing solution into the scrubber shall be within the stack test specification (minimum of 7 gallons per minute). The Permittee shall deviate for this specification if it can be demonstrated by methods acceptable to the Department that the unit remain in compliance with the regulations stated in Part B(3)(e) and (i). **[Reference: MDE PTC 03-6-1732M, Section D(1), issued 4/12/2001]**
- (3) Gases from galvanizing tank shall not be directly vented outside of the building. **[Reference: MDE PTC 03-6-1732N, Section D(2), issued 4/12/2001]**
- (4) The Permittee shall not cause or permit the discharge into the atmosphere more than 0.28 kilogram VOC per liter (kg VOC/l) of coating solids applied for each calendar month for each affected facility that does not use an emission control device(s).

[Reference: §60.462(a)(1)-NSPS Subpart TT, & MDE PTC 03-6-1732M, Part (D)(3), issued 4/12/2001]

- (5) The galvanizing and galvalume hot dip coating lines shall be properly maintained in accordance with ISG's preventative maintenance plan. A visual inspection shall be performed daily to ensure the integrity and proper operation of the alkali-cleaning tank. **[Reference: MDE PTC 03-6-1732M, Part (E)(1), issued 4/12/2001]**

For No. 3 (Coating) Galvalume Line – Caustic Washer with scrubber (Emission Unit CSM3GRC)

- (1) The caustic washing system shall be equipped with an absorbing scrubber that has a monitor and recorder to continuously monitor and record the flow rate of the scrubbing solution when in the caustic washing system is in operation. **[Reference: MDE 03-6-0948M, Part C(3), issued 8/22/1997]**
- (2) The minimum flow rate of scrubbing solution entering the absorbing scrubber shall be at least 30 gallons per minute. The Permittee may deviate from this flow rate, if it can demonstrate by methods acceptable to the Department that the system will remain in compliance.

[Reference MDE PTC 6-0948, Part C(4), issued 8/22/1997]

Compliance Demonstration

The flow rate of the scrubbing solution entering the scrubber connected to the alkali-cleaning unit shall be continuously monitored and recorded. **[Reference: MDE PTC 03-6-1732M, Part E(2), issued 4/12/2001]**

The Permittee shall conduct a performance test for each calendar month for the metal roll coating operation according to the procedures in 40CFR §60-463 – Performance Test and Compliance Provisions. **[Reference: MDE PTC 03-6-1732M, Part E(3), issued 4/12/2001]**

The Permittee shall visually inspect the scrubbers daily. **[Reference: MDE PTC 03-6-1732N, Section D(1)]**

The Permittee shall continuously monitor and record the flow rate of the scrubbing solution entering the scrubber connected to the alkali-cleaning unit. **[Reference: MDE PTC 03-6-1732M, part E(2)]**

For No. 4 Alkaline Cleaning Tank/Cleaner Storage with Scrubber only (Emission Unit CSM4HDAC)

The Permittee shall keep records of the flow rate in the scrubber to the alkali-cleaning unit. These records shall be kept on-site for at least five years and be made available to the Department upon request.

[Reference MDE PTC 03-6-1732M, Part (F)(1), issued 4/12/2001].

The Permittee shall compute and record the average VOC content of coating applied during each calendar month for the metal roll coating operation according to the equations provided in 40 CFR §60-463. **[Reference MDE PTC 03-6-1732M, Part (F)(3), issued 4/12/2001]**

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The Permittee shall maintain at the site, for a period of five years records of all data and calculations used to determine monthly VOC emissions from the metal roll coating operation and to determine the monthly emission limit found in Part B(1)(1)(i). **[Reference MDE PTC 03-6-1732M, Part (F)(5), issued 4/12/2001]**

For No. 3 Galvalume Line – Caustic Washer with scrubber only **(Emission Unit CSM3GRC)**

The Permittee shall keep records of the flow rate to the absorbing scrubber. These records shall be kept on site for at least five years and be made available to the Department upon request. **[Reference MDE PTC 6-0948, Part C(5), issued 8/22/1997]**

The Permittee shall, report any malfunction or temporary increase in the emissions for the #4 hot dip coating line, including roll coating system, to the Department in accordance with the requirements of COMAR 26.11.01.07. **[Reference: MDE PTC 03-6-1732M, Part (F)(6), issued 4/12/2001].**

For No. 3 Galvalume Line – Caustic Washer with scrubber only (Emission Unit CSM3GRC)

The Permittee shall report any malfunction or temporary increases in the emissions for the No. 3 galvalume coating line including the caustic washing system to the Department in accordance with the requirements of COMAR 26.11.01.07. **[Reference: MDE PTC #03-6-0948M, issued 8/22/1997]**

Emission Units: Cold Reduction Mill [6-2371]

Pickling Line equipped with packed bed wet scrubber consisting of the following:

- (1) Electrostatic Oiler. **(CRPPLEO)**
- (2) Pickling Storage tanks **(CRPLPST)**
- (3) Pickling tanks **(CRPLPT)**
- (4) Scale Breaker **(CRPPLSB) with baghouse**
- Tandem Mill (with Mist Eliminator). **(CRPTM)**
- Anti-coil reel scale breaker with baghouse **(CRPPLSBARBH)**
- Skin Pass Mill (with Mist Eliminator) **(CRPSPM) with Oiler (CRPSPMEO)**
- Tension Leveling Line Electrostatic oiler **(CRPTLEO-F)**
- Hydrogen Anneal – Annealing furnaces **(CRPHA)**
- Coil Build-Up Line **(CRPCBL)** [insignificant activity]

The Cold Reduction Mill (CRM) is composed interconnected processes that operates in series with one another. The pickling operation, prepares sheet steel from the hot strip mill for further processing in the Tandem Mills. Steel is uncoiled, welded to the previous strip and the scale is broken before sending it through a continuous bath of hydrochloric (HCL) acid pickling solution. In the Pickler, the acid flows countercurrent with the strip and HCL emissions are controlled by a wet scrubber. Particulate emissions from the scale breaker are controlled by two baghouses, one which events inside the building and the other outside. After processing the strip through the scale breaker and HCL pickler, the strip is rinsed and dried before it passes through an electrostatic oiler to apply a rust-preventive surface film on the strip. After oiling, the strip can either be recoiled or sent directly to the Tandem Mill. The HCL pickler is subject to **40 CFR 63 Subpart CCC – MACT for HCL steel picklers.**

The Tandem Mill, consisting of a five-strand continuous mill arrangement, reduces the thickness of the strip, produces a smooth, dense surface and develops the required metallurgical properties of the steel. The Mill uses a combination of oils, detergents, and water for heat transfer and lubrication as the coil is rolled. During the rolling, the mechanical action generates a mist of oils, detergents, and water that is collected by a fume-

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exhaust system that vents to a mist eliminator where the mist droplets are removed. After processing the strip through the Tandem Mill, the strip is recoiled and prepared for shipment to customers or for further processing by ISG.

There are twelve (12) hydrogen annealing furnace bells (22 annealing bases) for batch annealing of the cold-rolled steel coils. In the process, hydrogen gas is injected into an inner cover over the stack of coils inside the annealing bell to create an inert atmosphere. Natural gas is fired into the bell, which heats the hydrogen and in turn heats the coils. The annealing process can last for 15 to 20 hours and the emissions from the furnaces are emitted inside the building, which eventually exit through the building's roof monitor.

The Skin Pass Mill is a stand-alone process that can cold work the annealed coils from the Hydrogen Annealing Furnaces to the customer's desired surface finish. During the rolling operation, sometimes a rolling solution can be applied to the strip before entering the mill stand. After rolling, the strip is air-dried, re-coiled and oiled if required for rust protection. VOC emissions from the oils used in the Mill are collected by a fume exhaust system that vents to a mist eliminator.

An HCL tack test was performed on the HCL pickler scrubber on April 17, 2001 and September 8-9, 2003 showing compliance with the 6 ppmv HCL MACT emission limit and the 0.46 lb/hr air toxic emission limit. The HCL concentration during the 2001 test was 1.1 ppmvd or 0.040 lbs/hr and during the 2003 test it was less than 0.013 ppmvd or less than 4.78×10^{-4} lbs/hr.

Particulate matter stack tests were conducted on the Scale Breaker baghouse and Tandem Mill and Skin Pass Mill mist eliminators during January 16-18, 2001 showing compliance with the 0.3 gr/dscf particulate matter emission limit.

As per the Operating Permit, alternate testing was requested in letter dated 1/10/02 to test every 2½ years. Last test performed September 8 & 9, 2003.

Note: Based on the latest stack test, the Permittee shall operate the Pickler scrubber flow rate (on a hourly average) as follows: Re-circulation flow rate = 424.4 gallons per minute and make-up water flow rate = 3.4 gallons per minute. HCl – 0.013 ppmvd (0.000478 lb.hr).

Combustion analyses for NO_x, CO and VOC emissions were performed on the annealing furnaces during July 18-19, 2000.

The following table summarizes the actual emissions from the facility as reported in their annual Emission Certification Report (ECR):

Data Year	NO _x TPY	SO _x TPY	PM ₁₀ TPY	CO TPY	VOC TPY
2000	6	0	9	0	13
2001	9	0	3	0	23
2002	10	0	3	0	21

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Applicable Standards/Limits:

A. Control of Visible Emissions

For the Scrubber and baghouse only

COMAR 26.11.10.03A(1) – Visible Emissions

“A person may not cause or permit the discharge of confined emissions from any installation, other than water in an uncombined form, which is visible to human observers.”

COMAR 26.11.10.03A(2) – Exceptions. “Sections A(1) of this regulation does not apply to the following:

(e) Confined emissions resulting from start-ups, process modifications or adjustments, or occasional cleaning of control equipment if: (i) The visible emissions are not greater than 40 percent opacity; and (ii) The visible emissions do not occur for more than 6 consecutive minutes in any 60 minute period.”

Compliance Demonstration

The Permittee shall visually inspect the exhaust gases from all control equipment [scrubber and baghouse] stack for visible emissions once a week for an 18-minute period and shall record the results of each observation. If no visible emissions are observed in six consecutive months for the exhaust stack of any emission unit, the Permittee may decrease the frequency of visual inspection from once weekly to once monthly for the exhaust stack of that emission unit. If visible emissions are observed during any monthly visual inspection, the Permittee must resume visible inspection of the exhaust stack of that emission unit once a week basis and maintain that schedule until no visible emissions are observed in six consecutive months. If no visible emissions are observed during the once a month visible inspection for the exhaust stack of any emission unit, the Permittee may decrease the frequency of visual inspection from monthly to semi-annually for the exhaust stack of that emission unit. If visible emissions are observed during any semi-annual visible inspection, the Permittee must resume visible inspection of the exhaust stack of that emission unit on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly inspections. The Permittee shall maintain on site a log of the dates and results of visible emissions observations for a period of at least five years. The Permittee shall report incidents of visible emissions in accordance with permit condition 4, Section III, Plant Wide Conditions, “Report of Excess Emissions and Deviations.” The Permittee shall also make the records available to the Department upon request. **[Reference: COMAR 26.11.03.06C]**

B. Control of Particulate Matter

For Scrubber and baghouse only

COMAR 26.11.10.04A – Confined Emissions

“A person may not cause or permit the discharge of confined emissions of particulate matter in excess of 0.03 gr/scfd (68.7 mf/dscm) from any iron or steel production installation.”

For Mills and Oilers only

COMAR 26.11.10.04B(1) – Particulate Matter Fugitive Emissions

“A person may not cause or permit the discharge of fugitive emissions of particulate matter from an iron and steel production installation unless reasonable control methods are employed to minimize emissions. These methods include the use of hoods and control equipment to capture emissions, other control techniques, and process restrictions”

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Compliance Demonstration

For Scrubber and baghouse only: The Permittee shall develop and maintain a preventive maintenance plan for the scrubber, super heaters and reheat furnace that describes the maintenance activity and time schedule for completing each activity. The Permittee shall perform maintenance activities within the time frames established in the plan and shall maintain a log with records of the dates and description of the maintenance that was performed. The Permittee shall maintain a copy of the preventive maintenance plan and a record of the dates of and description of maintenance activity performed. The Permittee shall maintain records of the baghouse malfunctions and the corrective actions taken to bring into proper operation. The Permittee shall submit the maintenance plan and records of maintenance activities to the Department upon request. **[Reference: COMAR 26.11.03.06C]**

For Mills and Oilers only: The Permittee shall prepare and maintain a plan that contains an explanation of the reasonable precautions that will be used to prevent particulate matter from becoming airborne. Once a month, the Permittee shall perform an inspection of the operations to verify that the reasonable precautions are being implemented. The Permittee shall reevaluate the effectiveness of the reasonable precautions plan annually. The Permittee shall maintain the plan of reasonable precautions and keep records of dates and results of visual observation of the operations. These records shall be kept on site for a period of at least five years. The Permittee shall submit the plan and records of visual observation of the operations to the Department upon request. **[Reference: COMAR 26.11.03.06C]**. The Permittee shall monitor the pressure drop across the mist eliminators and maintain such records. The Permittee shall record the pressure drop across the mist eliminator at least once per operating day. **[Reference: MDE PTC #03-6-2371M, issued 8/12/1999]**.

C. Control of VOC Emissions

COMAR 26.11.10.06(B) - Control of VOC Emissions from Installations That Use Rolling Oils or Rust Preventive Oils

A. Applicability.

- (1) This regulation applies to a person who owns or operates an installation that has actual VOC emissions of 20 pounds or more per day located at an iron and steel production facility that has the potential to emit total plant wide VOC emissions of 25 tons or more per year.
- (2) Roll coaters at hot dip coating installations located at an iron and steel production facility are subject to COMAR 26.11.19.05 and federal New Source Performance Standards incorporated by reference at COMAR 26.11.06.12.

B. Control of VOC Emissions from Installations That Use Rolling Oils or Rust Preventive Oils. "The following installations may not use oils or rust preventive oils that have a vapor pressure greater than 1 millimeter of mercury at 25 Celsius: (1) Hot rolling operations; (2) Cold rolling operations; and (3) Coating operations including both hot dip coating and electrolytic plating installations. "

Compliance Demonstration

The Permittee shall keep MSDS or other data sheets, that indicates the vapor pressure of the rolling oils and rust preventative oils that are used at the hot rolling mill. These records shall be kept on site for at least five (5) years and shall be made available to the Department upon request. **[Reference: COMAR 26.11.03.06C]**.

For Steel Pickling Operation including Pickling Storage Tanks (CRPLPST) & Pickling Tanks

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(CRPPLPT) only

40 CFR Part 63, Subpart CCC – National Emission Standards for Hazardous Air Pollutants for Steel Pickling – HCl Process Facilities and Hydrochloric Acid Regeneration Plants.

§63.1155 - Applicability.

(a) The provisions of this subpart apply to the following facilities and plants that are major sources for hazardous air pollutants (HAP) or are parts of facilities that are major sources for HAP:

- (1) All new and existing steel pickling facilities that pickle carbon steel using hydrochloric acid solution that contains 6 percent or more by weight HCl and is at a temperature of 100 °F or higher; and
- (2) All new and existing hydrochloric acid regeneration plants.

§63.1158 - Emission standards for new or reconstructed sources.

(a) Pickling lines—(1) Continuous pickling lines. No owner or operator of a new or reconstructed affected continuous pickling line at a steel pickling facility shall cause or allow to be discharged into the atmosphere from the affected pickling line:

- (i) Any gases that contain HCl in a concentration in excess of 6 ppmv; or
- (ii) HCl at a mass emission rate that corresponds to a collection efficiency of less than 99 percent."

§63.1160 - Compliance dates and maintenance requirements.

(a)(2) The owner or operator of a new or reconstructed steel pickling facility and/or hydrochloric acid regeneration plant subject to this subpart that commences construction or reconstruction after September 18, 1997, shall achieve compliance with the requirements of this subpart immediately upon startup of operations or by June 22, 1999, whichever is later.

(b) Maintenance requirements. (1) The owner or operator of an affected source shall comply with the operation and maintenance requirements prescribed under §63.6(e) of subpart A of this part.

(2) In addition to the requirements specified in paragraph (b)(1) of this section, the owner or operator shall prepare an operation and maintenance plan for each emission control device to be implemented no later than the compliance date. The plan shall be incorporated by reference into the source's title V permit. All such plans must be consistent with good maintenance practices and, for a scrubber emission control device, must at a minimum:

- (i) Require monitoring and recording the pressure drop across the scrubber once per shift while the scrubber is operating in order to identify changes that may indicate a need for maintenance;
- (ii) Require the manufacturer's recommended maintenance at the recommended intervals on fresh solvent pumps, recirculating pumps, discharge pumps, and other liquid pumps, in addition to exhaust system and scrubber fans and motors associated with those pumps and fans;
- (iii) Require cleaning of the scrubber internals and mist eliminators at intervals sufficient to prevent buildup of solids or other fouling;
- (iv) Require an inspection of each scrubber at intervals of no less than 3 months with:
 - (A) Cleaning or replacement of any plugged spray nozzles or other liquid delivery devices;
 - (B) Repair or replacement of missing, misaligned, or damaged baffles, trays, or other internal components;
 - (C) Repair or replacement of droplet eliminator elements as needed;
 - (D) Repair or replacement of heat exchanger elements used to control the temperature of fluids entering or leaving the scrubber; and
 - (E) Adjustment of damper settings for consistency with the required airflow.
- (v) If the scrubber is not equipped with a view port or access hatch allowing visual inspection, alternate means of inspection approved by the Administrator may be used.
- (vi) The owner or operator shall initiate procedures for corrective action within 1 working day of detection of an operating problem and complete all corrective actions as soon as practicable. Procedures to be

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initiated are the applicable actions that are specified in the maintenance plan. Failure to initiate or provide appropriate repair, replacement, or other corrective action is a violation of the maintenance requirement of this subpart.

(vii) The owner or operator shall maintain a record of each inspection, including each item identified in paragraph (b)(2)(iv) of this section, that is signed by the responsible maintenance official and that shows the date of each inspection, the problem identified, a description of the repair, replacement, or other corrective action taken, and the date of the repair, replacement, or other corrective action taken.

Operational Limit

§63.1159 - Operational and equipment standards for existing, new, or reconstructed sources.

(b) Hydrochloric acid storage vessels. The owner or operator of an affected vessel shall provide and operate, except during loading and unloading of acid, a closed-vent system for each vessel. Loading and unloading shall be conducted either through enclosed lines or each point where the acid is exposed to the atmosphere shall be equipped with a local fume capture system, ventilated through an air pollution control device.

Compliance Demonstration

§63.1161 - Performance testing and test methods

(a) Demonstration of compliance. The owner or operator shall conduct an initial performance test for each process or emission control device to determine and demonstrate compliance with the applicable emission limitation according to the requirements in §63.7 of subpart A of this part and in this section.

(1) Following approval of the site-specific test plan, the owner or operator shall conduct a performance test for each process or control device to either measure simultaneously the mass flows of HCl at the inlet and the outlet of the control device (to determine compliance with the applicable collection efficiency standard) or measure the concentration of HCl (and Cl₂ for hydrochloric acid regeneration plants) in gases exiting the process or the emission control device (to determine compliance with the applicable emission concentration standard).

(2) Compliance with the applicable concentration standard or collection efficiency standard shall be determined by the average of three consecutive runs or by the average of any three of four consecutive runs. Each run shall be conducted under conditions representative of normal process operations.

(3) Compliance is achieved if either the average collection efficiency as determined by the HCl mass flows at the control device inlet and outlet is greater than or equal to the applicable collection efficiency standard, or the average measured concentration of HCl or Cl₂ exiting the process or the emission control device is less than or equal to the applicable emission concentration standard.

As per the Operating Permit, alternate testing was requested in letter dated 1/10/02 to test every 2½ years. Last test performed September 8 & 9, 2003.

(b) Establishment of scrubber operating parameters. During the performance test for each emission control device, the owner or operator using a wet scrubber to achieve compliance shall establish site-specific operating parameter values for the minimum scrubber makeup water flow rate and, for scrubbers that operate with recirculation, the minimum recirculation water flow rate. During the emission test, each operating parameter must be monitored continuously and recorded with sufficient frequency to establish a representative average value for that parameter, but no less frequently than once every 15 minutes. The owner or operator shall determine the operating parameter monitoring values as the averages of the values recorded during any of the runs for which results are used to establish the emission concentration

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or collection efficiency per paragraph (a)(2) of this section. An owner or operator may conduct multiple performance tests to establish alternative compliant operating parameter values. Also, an owner or operator may reestablish compliant operating parameter values as part of any performance test that is conducted subsequent to the initial test or tests.

Note: Based on the latest stack test, the Permittee shall operate the Pickler scrubber flow rate (on a hourly average) as follows: Re-circulation flow rate = 424.4 gallons per minute and make-up water flow rate = 3.4 gallons per minute. HCl – 0.013 ppmvd (0.000478 lb.hr).

(d) Test methods. (1) The following test methods in appendix A of 40 CFR part 60 shall be used to determine compliance under §63.1157(a), §63.1157(b), §63.1158(a), and §63.1158(b) of this subpart:

- (i) Method 1, to determine the number and location of sampling points, with the exception that no traverse point shall be within one inch of the stack or duct wall;
- (ii) Method 2, to determine gas velocity and volumetric flow rate;
- (iii) Method 3, to determine the molecular weight of the stack gas;
- (iv) Method 4, to determine the moisture content of the stack gas; and
- (v) Method 26A, "Determination of Hydrogen Halide and Halogen Emissions from Stationary Sources—Isokinetic Method," to determine the HCl mass flows at the inlet and outlet of a control device or the concentration of HCl discharged to the atmosphere, and also to determine the concentration of Cl₂ discharged to the atmosphere from acid regeneration plants. If compliance with a collection efficiency standard is being demonstrated, inlet and outlet measurements shall be performed simultaneously. The minimum sampling time for each run shall be 60 minutes and the minimum sample volume 0.85 dry standard cubic meters (30 dry standard cubic feet). The concentrations of HCl and Cl₂ shall be calculated for each run as follows:

$CHCl(ppmv) = 0.659 CHCl(mg/dscm),$

and $CCl_2(ppmv) = 0.339 CCl_2(mg/dscm),$

where C(ppmv) is concentration in ppmv and C(mg/dscm) is concentration in milligrams per dry standard cubic meter as calculated by the procedure given in Method 26A.

(2) The owner or operator may use equivalent alternative measurement methods approved by the Administrator.

§63.1162 - Monitoring requirements.

(a) The owner or operator of new, reconstructed, or existing steel pickling facility or acid regeneration plant subject to this subpart shall:

(1) Conduct performance tests to measure the HCl mass flows at the control device inlet and outlet or the concentration of HCl exiting the control device according to the procedures described in §63.1161 of this subpart. Performance tests shall be conducted either annually or according to an alternative schedule that is approved by the applicable permitting authority, but no less frequently than every 2½ years or twice per title V permit term. If any performance test shows that the HCl emission limitation is being exceeded, then the owner or operator is in violation of the emission limit.

(2) In addition to conducting performance tests, if a wet scrubber is used as the emission control device, install, operate, and maintain systems for the measurement and recording of the scrubber makeup water flow rate and, if required, recirculation water flow rate. These flow rates must be monitored continuously and recorded at least once per shift while the scrubber is operating. Operation of the wet scrubber with excursions of scrubber makeup water flow rate and recirculation water flow rate less than the minimum values established during the performance test or tests will require initiation of corrective action as specified by the maintenance requirements in §63.1160(b)(2) of this subpart.

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§63.1165 - Record keeping requirements.

(a) General record keeping requirements. As required by §63.10(b)(2) of subpart A of this part, the owner or operator shall maintain records for 5 years from the date of each record of:

- (1) The occurrence and duration of each startup, shutdown, or malfunction of operation (i.e., process equipment);
- (2) The occurrence and duration of each malfunction of the air pollution control equipment;
- (3) All maintenance performed on the air pollution control equipment;
- (4) Actions taken during periods of startup, shutdown, and malfunction and the dates of such actions (including corrective actions to restore malfunctioning process and air pollution control equipment to its normal or usual manner of operation) when these actions are different from the procedures specified in the startup, shutdown, and malfunction plan;
- (5) All information necessary to demonstrate conformance with the startup, shutdown, and malfunction plan when all actions taken during periods of startup, shutdown, and malfunction (including corrective actions to restore malfunctioning process and air pollution control equipment to its normal or usual manner of operation) are consistent with the procedures specified in such plan. This information can be recorded in a checklist or similar form (see §63.10(b)(2)(v) of subpart A of this part);
- (6) All required measurements needed to demonstrate compliance with the standard and to support data that the source is required to report, including, but not limited to, performance test measurements (including initial and any subsequent performance tests) and measurements as may be necessary to determine the conditions of the initial test or subsequent tests;
- (7) All results of initial or subsequent performance tests;
- (8) If the owner or operator has been granted a waiver from record keeping or reporting requirements under §63.10(f) of subpart A of this part, any information demonstrating whether a source is meeting the requirements for a waiver of record keeping or reporting requirements;
- (9) If the owner or operator has been granted a waiver from the initial performance test under §63.7(h) of subpart A of this part, a copy of the full request and the Administrator's approval or disapproval;
- (10) All documentation supporting initial notifications and notifications of compliance status required by §63.9 of subpart A of this part; and
- (11) Records of any applicability determination, including supporting analyses.

(b) Subpart CCC records. (1) In addition to the general records required by paragraph (a) of this section, the owner or operator shall maintain records for 5 years from the date of each record of:

- (i) Scrubber makeup water flow rate and recirculation water flow rate if a wet scrubber is used;
- (ii) Calibration and manufacturer certification that monitoring devices are accurate to within 5 percent; and
- (iii) Each maintenance inspection and repair, replacement, or other corrective action.

(2) The owner or operator of an acid regeneration plant shall also maintain records for 5 years from the date of each record of process off gas temperature and parameters that determine proportion of excess air.

(3) The owner or operator shall keep the written operation and maintenance plan on record after it is developed to be made available for inspection, upon request, by the Administrator for the life of the affected source or until the source is no longer subject to the provisions of this subpart. In addition, if the operation and maintenance plan is revised, the owner or operator shall keep previous (i.e., superseded) versions of the plan on record to be made available for inspection by the Administrator for a period of 5 years after each revision to the plan.

(c) Recent records. General records and subpart CCC records for the most recent 2 years of operation must be maintained on site. Records for the previous 3 years may be maintained off site.

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§63.1164 - Reporting requirements.

(a) Reporting results of performance tests. As required by §63.10(d)(2) of subpart A of this part, the owner or operator of an affected source shall report the results of any performance test as part of the notification of compliance status required in §63.1163 of this subpart.

(b) Progress reports. The owner or operator of an affected source who is required to submit progress reports under §63.6(i) of subpart A of this part shall submit such reports to the Administrator (or the State with an approved permit program) by the dates specified in the written extension of compliance.

(c) Periodic startup, shutdown, and malfunction reports. Section 63.6(e) of subpart A of this part requires the owner or operator of an affected source to operate and maintain each affected emission source, including associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions at least to the level required by the standard at all times, including during any period of startup, shutdown, or malfunction. Malfunctions must be corrected as soon as practicable after their occurrence in accordance with the startup, shutdown, and malfunction plan.

(1) Plan. As required by §63.6(e)(3) of subpart A of this part, the owner or operator shall develop and implement a written startup, shutdown, and malfunction plan that describes, in detail, procedures for operating and maintaining the source during periods of startup, shutdown, or malfunction, and a program of corrective action for malfunctioning process and air pollution control equipment used to comply with the relevant standard.

(2) Reports. As required by §63.10(d)(5)(i) of subpart A of this part, if actions taken by an owner or operator during a startup, shutdown, or malfunction of an affected source (including actions taken to correct a malfunction) are consistent with the procedures specified in the startup, shutdown, and malfunction plan, the owner or operator shall state such information in a semiannual report. The report, to be certified by the owner or operator or other responsible official, shall be submitted semiannually and delivered or postmarked by the 30th day following the end of each calendar half; and

(3) Immediate Reports. Any time an action taken by an owner or operator during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) is not consistent with the procedures in the startup, shutdown, and malfunction plan, the owner or operator shall comply with all requirements of §63.10(d)(5)(ii) of subpart A of this part.

**D. Control of NO_x Emissions
For the Annealing Furnaces**

COMAR 26.11.09.08J – Requirements for Industrial Furnaces and Other Miscellaneous Installations that Cause Emissions of NO_x. - A person who owns or operates any installation other than fuel-burning equipment that causes NO_x emissions shall:

- (1) Maintain good operating practices as recommended by the equipment vendor to minimize NO_x emissions;
- (2) Prepare and implement a written in-house training program for all operators of these installations that include instruction on good operating and maintenance practices for the particular installation;
- (3) Maintain and make available to the Department, upon request, the written in-house operator training program;
- (4) Burn only gas in each installation, where gas is available, during the period May 1 through September 30 of each year; and
- (5) Maintain operator training attendance records for each operator at the site for at least 2 years and make these records available to the Department upon request.

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Compliance Demonstration

The Permittee shall maintain good operating practices as recommended by the equipment vendor to minimize NO_x emissions. **[Reference: COMAR 26.11.09.08J(1)]** The Permittee shall prepare and implement a written in-house training program for all operators of these installations that include instruction on good operating and maintenance practices for the particular installation. (Note: COMAR 26.11.09.08B(5)(a) states that “for the purpose of this regulation, the equipment operator to be trained may be the person who maintains the equipment and makes the necessary adjustments for efficient operation”). The Permittee shall maintain the written in-house operator-training program and operator training attendance records for each operator at the site for at least 2 years. The Permittee shall make available to the Department, upon request, the written in-house operator-training program and records of the operator training attendance. **[Reference: COMAR 26.11.09.08J(2)]**

E. Operational Limit

- (1) Upon full operation of the new Cold Reduction Mill emissions from the existing equipment related to the cold reduction that will remain in permanent use shall, in the aggregate, not exceed the following limits calculated over a rolling 12-month period:

Pollutant	Emissions Limits (tons per year)
PM ₁₀	153.5
VOC	66.3
NO _x	70.5
CO	196.7
SO ₂	0.3

[Reference: MDE PTC 03-6-2371M, Part D(1), issued August 12, 1999]

- (2) The oilers at Tandem Mill and the Skin Pass Mill shall use only low volatility rolling oils (low volatility oil is any oil with a vapor pressure of less than one milliliter of mercury at 25°C). **[Reference: MDE PTC 03-6-2371M, Section D(3)(b)(1), issued August 12, 1999]**
- (3) The oilers located in the cold reduction mill shall use rust preventative oils with a vapor pressure of less than one milliliter of mercury at 25°C. **[Reference: MDE PTC 03-6-2371M, Part D(3)(b)(2), issued August 12, 1999]**

Compliance Demonstration

The Permittee shall record the following parameters at least once per operating day: (a) tandem mill scrubber – pressure drop; (b) skin pass mill scrubber – pressure drop; and (c) scale breaker baghouse – pressure drop.” **[Reference: MDE PTC 03-6-2371M, Part F(3), issued August 12, 1999]**

The Permittee shall maintain records the rolling oils used in the Tandem Mill, Skin pass Mill and oilers to demonstrate compliance with the operational limits. **[Reference: MDE PTC 03-6-2371M, Part F(5), issued August 12, 1999]**

Emission Unit: TIN Mill PRODUCTS [6-0949]

TM3PD: Descaling.

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TM3POR: Oiling/Recoil.

TM3PSD: Steam Dry.

TM3PMH: Tin Mill #3 Pickler, Building Fugitives.

TM3P2,3,5: Tin Mill #3 Pickler, Pickling Tanks with (4) scrubbers. [Three scrubbers operating and one spare]

TM48TMMH: 48" Tandem Mill with two mist eliminators.

TM6SPMMH: No. 6 Skin Pass Mill with Baghouse (TM6SPM) baghouse exhausts indoors

TM3DM: No. 3 Duo Mill with fume-exhaust system.

TM1HLEO: No. 1 Tin Plate Line Electrostatic Oiler.

TM2HLEO: No. 2 Tin Plate Line Electrostatic Oiler.

TM8CLEO: No. 8 Chrome Line Electrostatic Oiler

TM6WSD: No. 6 Washer Steam Dryer and scrubber.

TM5CASD: Annealing Steam Drier.

TM5CPO: No. 5 Coil Preparation Line Oiler

TM5CAAF: Continuous Annealing Furnace with caustic cleaning section and scrubber.

TM1HLS1/2: No. 1 Tin Plate Line with Scrubber No. 1 and 2.

TM1HLS3/4: No. 1 Tin Plate Line with Scrubber No. 3 and 4.

TM2HLS4&5: No. 2 Tin Plate Line with Scrubber No. 4 and 5.

TM2HLS1,2,3: No. 2 Tin Plate Line with Scrubber Nos. 1,2 and 3.

TM8CLS1: No. 2 No. 8 Chrome Line with Scrubber No. 1. [pickler and cleaner]

TM8CLS2: No. 2 No. 8 Chrome Line with Scrubber No. 2. [Plating and chem. Treat]
Box annealing (located in old cold mill)

Applicable Standards/Limits:

A. Control of Visible Emissions

For Scrubbers only

COMAR 26.11.10.03A(1) – Visible Emissions

"A person may not cause or permit the discharge of confined emissions from any installation, other than water in an uncombined form, which is visible to human observers."

COMAR 26.11.10.03A(2) – Exceptions. "Sections A(1) of this regulation does not apply to the following:

(e) Confined emissions resulting from start-ups, process modifications or adjustments, or occasional cleaning of control equipment if: (i) The visible emissions are not greater than 40 percent opacity; and (ii) The visible emissions do not occur for more than 6 consecutive minutes in any 60 minute period."

Compliance Demonstration

The Permittee shall visually inspect the exhaust gases from all control equipment [scrubber and baghouse] stack for visible emissions once a week for an 18-minute period and shall record the results of each observation. If no visible emissions are observed in six consecutive months for the exhaust stack of any emission unit, the Permittee may decrease the frequency of visual inspection from once weekly to once monthly for the exhaust stack of that emission unit. If visible emissions are observed during any monthly visual inspection, the Permittee must resume visible inspection of the exhaust stack of that emission unit once a week basis and maintain that schedule until no visible emissions are observed in six consecutive months. If no visible emissions are observed during the once a month visible inspection for the exhaust stack of any emission unit, the Permittee may decrease the frequency of visual inspection from monthly to semi-annually for the exhaust stack of that emission unit. If visible emissions are observed during any semi-annual visible inspection, the Permittee must resume visible inspection of the

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exhaust stack of that emission unit on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly inspections. The Permittee shall maintain on site a log of the dates and results of visible emissions observations for a period of at least five years. The Permittee shall report incidents of visible emissions in accordance with permit condition 4, Section III, Plant Wide Conditions, "Report of Excess Emissions and Deviations." The Permittee shall also make the records available to the Department upon request. **[Reference: COMAR 26.11.03.06C]**

B. Control of Particulate Matter

For Scrubber and Baghouse only

COMAR 26.11.10.04A – Confined Emissions

"A person may not cause or permit the discharge of confined emissions of particulate matter in excess of 0.03 gr/scfd (68.7 mf/dscm) from any iron or steel production installation."

For Oilers and Mills only

COMAR 26.11.10.04B(1) – Particulate Matter Fugitive Emissions

"A person may not cause or permit the discharge of fugitive emissions of particulate matter from an iron and steel production installation unless reasonable control methods are employed to minimize emissions. These methods include the use of hoods and control equipment to capture emissions, other control techniques, and process restrictions"

Compliance Demonstration

For Scrubber and Baghouse only: The Permittee shall develop and maintain a preventive maintenance plan for the scrubber, and baghouse that describes the maintenance activity and time schedule for completing each activity. The Permittee shall perform maintenance activities within the time frames established in the plan and shall maintain a log with records of the dates and description of the maintenance that was performed. The Permittee shall maintain a copy of the preventive maintenance plan and a record of the dates of and description of maintenance activity performed. The Permittee shall maintain records of the baghouse malfunctions and the corrective actions taken to bring into proper operation. The Permittee shall submit the maintenance plan and records of maintenance activities to the Department upon request. **[Reference: COMAR 26.11.03.06C]**

For Mills and Oilers only: The Permittee shall prepare and maintain a plan that contains an explanation of the reasonable precautions that will be used to prevent particulate matter from becoming airborne. Once a month, the Permittee shall perform an inspection of the operations to verify that the reasonable precautions are being implemented. The Permittee shall reevaluate the effectiveness of the reasonable precautions plan annually. The Permittee shall maintain the plan of reasonable precautions and keep records of dates and results of visual observation of the operations. These records shall be kept on site for a period of at least five years. The Permittee shall submit the plan and records of visual observation of the operations to the Department upon request. **[Reference: COMAR 26.11.03.06C]**.

C. Control of VOC Emissions

COMAR 26.11.10.06(B) - Control of VOC Emissions from Installations That Use Rolling Oils or Rust Preventive Oils

"The following installations may not use oils or rust preventive oils that have a vapor pressure greater than 1 millimeter of mercury at 25 Celsius: (2) Cold rolling operations"

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Compliance Demonstration

The Permittee shall keep MSDS or other data sheets, that indicates the vapor pressure of the rolling oils and rust preventative oils that are used at the hot rolling mill. These records shall be kept on site for at least five (5) years and shall be made available to the Department upon request. **[Reference: COMAR 26.11.03.06C].**

D. Control of NO_x Emissions

For TM5CAAF – Continuous Annealing Furnace only.

COMAR 26.11.09.08J – Requirements for Industrial Furnaces and Other Miscellaneous Installations that Cause Emissions of NO_x. “A person who owns or operates any installation other than fuel-burning equipment that causes NO_x emissions shall:

- 1) Maintain good operating practices as recommended by the equipment vendor to minimize NO_x emissions;
- 2) Prepare and implement a written in-house training program for all operators of these installations that include instruction on good operating and maintenance practices for the particular installation;
- 3) Maintain and make available to the Department, upon request, the written in-house operator training program;
- 4) Burn only gas in each installation, where gas is available, during the period May 1 through September 30 of each year; and
- 5) Maintain operator training attendance records for each operator at the site for at least 2 years and make these records available to the Department upon request.”

Compliance Demonstration

The Permittee shall maintain good operating practices as recommended by the equipment vendor to minimize NO_x emissions. **[Reference: COMAR 26.11.09.08J(1)]**. The Permittee shall prepare and implement a written in-house training program for all operators of these installations that include instruction on good operating and maintenance practices for the particular installation (Note: COMAR 26.11.09.08B(5)(a) states that “for the purpose of this regulation, the equipment operator to be trained may be the person who maintains the equipment and makes the necessary adjustments for efficient operation).” The Permittee shall maintain the written in-house operator-training program and operator training attendance records for each operator at the site for at least 2 years. The Permittee shall make available to the Department, upon request, the written in-house operator-training program and records of operator training attendance. **[Reference: COMAR 26.11.09.08J(2)]**

E. Operational Limit

The following applies to the No. 8 Chrome Line with Scrubber 1 and Scrubber 2 (Emissions Units TM8CLS1 and TM8CLS2)

The plan specifies that spent pickle liquor will be added to the scrubber and that scrubber water and pickle liquor will be monitored. **[Reference: O&M Plan to MDE 4/2/93].**

Compliance Demonstration

The Permittee shall monitor the scrubber water and pickle liquor, and record at least once per operating day the water and pickle liquor flow to each of the wet scrubbers at the No. 8 Chrome Line. These

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records shall be kept onsite for at least five years and made available to the Department upon request.

[Reference: O&M Plan to MDE (4/2/93)]

The Permittee shall record at least once per operating day the water flow to each of the wet scrubbers. These records shall be kept onsite for at least five years and made available to the Department upon request. **[Reference: COMAR 26.11.03.06C].**

Emission Units: Power and Utilities: Pennwood Power Station

PUPB1: 723 MMBtu/hr Pennwood Boiler No. 1 – installed in 1949 [5-0491].

PUPB2: 723 MMBtu/hr Pennwood Boiler No. 2 – installed in 1949 [5-0492].

PUPB3: 812 MMBtu/hr Pennwood Boiler No. 3 – installed in 1954 [5-0414].

PUPB4: 1,085 MMBtu/hr Pennwood Boiler No. 4 – installed in 1957 [5-0415].

Pennwood power operates four boilers to generate steam and electric power that is tied to the Pennsylvania New Jersey Maryland (PJM) Interconnect. The boiler operate on a variety of fuels such as blast furnace gas (generated onsite), No. 6 fuel oil, used oil or waste combustible fluids, and natural gas).

40 CFR Part 60 Subpart D, Da, Db, and Dc Standards of Performance for Steam Generating Units, are not applicable since no units were constructed after the effective date of the regulations. The boilers have not undergone any major modification since its initial construction.

These boilers are not subject to NO_x budget program because they are not considered to be “fossil fuel fired fuel-burning equipment” as defined in COMAR 26.11.01.01B(17)(a). “Fossil fuel means natural gas, petroleum, coal, and any form of solid, liquid, or gaseous fuel derived from such material for the purpose of creating useful heat.” (40 CFR, Part 60). These boilers operate primarily on blast furnace gas, which is a byproduct of the steel making process.

Applicable Standards/Limits:

A. Control of Visible Emissions

COMAR 26.11.09.05A(2) – Visible Emissions Fuel Burning Equipment.

“In Areas III and IV, a person may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in an uncombined form, which is visible to human observers.”

COMAR 26.11.09.05A(3) - Exceptions. “Section A(1) and A(2) of this regulation does not apply to emissions during load changing, soot blowing, start-up, or adjustments or occasional cleaning of control equipment if:

- (a) The visible emissions are not greater than 40 percent opacity; and
- (b) The visible emissions do not occur for more than 6 consecutive minutes in any sixty minute period.”

Compliance Demonstration

Certification testing shall be repeated when the Department determines that the CEM data may be invalid because of component replacement or other conditions that may affect the quality of generated data.

[Reference: COMAR 26.11.01.10G(2)(c)]

The Permittee shall continuously monitor opacity of the stack gases using a continuous opacity monitor that meets the quality assurance criteria of the Department's Air Management Administration Technical

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Memorandum 90-01, "Continuous Emission Monitoring (CEM) Policies and Procedures" (October 1990), which is incorporated, by reference. **[Reference: COMAR 26.11.01.10]**. The Permittee shall perform EPA Method 9 observations at least once per day for 18-minute when the continuous opacity monitors are out of service. **[Reference: COMAR 26.11.03.06C]**

The Permittee shall maintain all records necessary to comply with the data reporting requirements of COMAR 26.11.01.10G(2). **[Reference: COMAR 26.11.01.10G(2)]**.

The Permittee shall submit a quarterly summary report and EPA Method 9 Observations to the Department not later than 30 days following each calendar quarter. The report shall be in a format approved by the Department, and shall include the following:

- (i) The cause, time periods, and magnitude of all emissions, which exceed the applicable emission standards;
- (ii) The source downtime including the time and date of the beginning and end of each downtime period and whether the source downtime was planned or unplanned;
- (iii) The time periods and cause of all CEM downtime including records of any repairs, adjustments, or maintenance that may affect the validity of emission data;
- (iv) Quarterly totals of excess emissions, installation downtime, and CEM downtime during the calendar quarter;
- (v) Quarterly quality assurance activities; and
- (vi) Daily calibration activities that include reference values, actual values, absolute or percent of span differences, and drift status; and
- (vii) Other information required by the Department that is determined to be necessary to evaluate the data, to ensure that compliance is achieved, or to determine the applicability of this regulation."

[Reference: COMAR 26.11.01.10G(2)]

CEM System Downtime Reporting Requirement: The Permittee shall report all system downtime that lasts or is expected to last more than 24 hours to the Department by telephone before 10 a.m. of the first regular business day following the breakdown. The system breakdown report shall include the reason, if known, for the breakdown and the estimated period of time that the CEM will be down. The owner or operator of the CEM shall notify the Department by telephone when an out-of-service CEM is back in operation and producing valid data. **[Reference: COMAR 26.11.01.10G(1)]**

B. Control of Sulfur Oxide Emissions

COMAR 26.11.09.07A(2) – Control of Sulfur Oxides From Fuel Burning Equipment. "A person may not burn, sell, or make available for sale any fuel with a sulfur content by weight in excess of or which otherwise exceeds the following limitations: In Areas III and IV:

- (a) All solid fuels, 1.0 percent;
- (b) Distillate fuel oils, 0.3 percent;
- (c) Residual fuel oils, 1.0 percent.

Compliance Demonstration

The Permittee shall obtain a certification from the fuel supplier indicating that the oil complies with the limitation on the sulfur content of fuel oil **[Reference: COMAR 26.11.03.06C]**. The Permittee shall retain fuel supplier certifications stating that the fuel oil is in compliance with this regulation. The Permittee shall report fuel supplier certifications to the Department upon request **[Reference: COMAR 26.11.09.07C]**.

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C. Control of NO_x Emissions

COMAR 26.11.09.08 - Control of NO_x Emissions for Major Stationary Sources,

(B) General Requirements and Conditions

"(1)(c) Emission Standards in Pounds of NO_x per Million Btu of heat input"

Fuel	Tangential-Fired	Wall-Fired
Gas only	0.20	0.20
Gas/Oil	0.25	0.25
Coal (dry bottom)	0.38	0.38
Coal (wet bottom)	1.00	1.00

(5) Operator Training.

- (a) "For purpose of this regulation, the equipment operator to be trained may be the person who maintains the equipment and makes the necessary adjustments for efficient operation.
- (b) The operator training course sponsored by the Department shall include an in-house training course that is approved by the Department."

Compliance Demonstration

The Permittee shall conduct NO_x stack testing on the boilers at least once during the life of the permit to show compliance with the emission limits. The Permittee shall submit a stack test protocol to the Department for approval 30 days prior to the schedule stack test date. **[Reference: COMAR 26.11.09.08B(2)(e)]** The Permittee shall report the results of the stack test to the Department 45 days after the performance testing. **[Reference: COMAR 26.11.03.06C]** The Permittee shall maintain a written in-house operator-training program and operator training attendance records for each operator at the site for at least 2 years. The Permittee shall make available to the Department, upon written, the written in-house operator-training program and records if operator training attendance. **[Reference: COMAR 26.11.09.08J(2)]**

Emission Units – Power and Utilities Cont'd - Utilities

PUCRPLHB: Chrome Reduction Plant Lime Silo with Baghouse [9-0949]

PUHCTPLSB: Humphrys Creek WWTP 2 Lime Silos with Baghouses and scrubber [9-0948]

Applicable Standards/Limits:

A. Control of Visible Emissions

COMAR 26.11.10.03A(1) – Visible Emissions

"A person may not cause or permit the discharge of emissions from any installation, other than water in an uncombined form, which is visible to human observers."

Exceptions: COMAR 26.11.10.03A(2)(e)-Section A(1) of this regulation does not apply to the following:
(c)"Confined emissions resulting from start-ups, process modifications or adjustments, or occasional cleaning of control equipment if: (i) The visible emissions are not greater than 40 percent opacity; and (ii) The visible emissions do not occur for more than 6 consecutive minutes in any 60 minute period."

Compliance Demonstration

The Permittee shall conduct a monthly one-minute visual observation of the baghouse exhaust. The visual

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observation must be conducted while the silos and baghouses are in operation. If no visible emissions are observed in six consecutive monthly observations from the baghouse exhaust, the Permittee may decrease the frequency of visual observations from monthly to quarterly for the baghouse exhaust. If visible emissions are observed during any quarterly visual observation, the Permittee must resume the observation of the baghouse exhaust on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly visual observations. If visible emissions are observed during any observation, the Permittee must inspect the baghouse for cause of visible emissions and perform necessary adjustments or repairs within 24-hours or prior to operating the silos. If visible emissions have not been eliminated, the Permittee shall perform daily 18-minute visual observation for opacity in accordance with EPA Reference Method 9 when operating the silos. The Permittee shall maintain on site a log of the dates and results of visible emissions observations for a period of at least 5 years. The Permittee shall report incidents of visible emissions in accordance with permit condition 4, Section III, Plant Wide Conditions, "Report of Excess Emissions and Deviations" [Reference: COMAR 26.11.03.06C]

B. Control of Particulate Matter

COMAR 26.11.10.04A – Particulate Matter Confined Emissions

"A person may not cause or permit the discharge of confined emissions of particulate matter in excess of 0.03 gr/scfd (68.7 mg/dscm) from any iron or steel production installation."

Compliance Demonstration

The Permittee shall develop and maintain a preventative maintenance plan for the baghouse that describes the maintenance activity and time schedule for completing each activity. The Permittee shall perform maintenance activities within the timeframes established in the plan and shall maintain a log with records of the dates that maintenance was performed. The Permittee shall maintain a copy of the preventive maintenance plan and a record of the dates of and description of maintenance activity performed. The Permittee shall maintain records of baghouse malfunctions and the corrective actions taken to bring it into proper operation. The Permittee shall submit the maintenance plan and record of maintenance activities to the Department upon request. [Reference: COMAR 26.11.03.06C]

Emission Units: MOBILE EQUIPMENT

MEYL: Greys Landfill [6-0940].

CPMEYL: Coke Point Landfill [6-0940].

MEYRTP: Paved Roads [9-1027].

CPMEYL: Unpaved Roads [9-1027].

Emissions from this landfill are generated during the dumping of waste, such as sludge, demolition debris, and inert material and asbestos. Fugitive dust emissions are also generated due to wind erosion. The facility controls dust particles from becoming airborne by watering and sweeping. Water trucks are scheduled as necessary, depending on weather to control emissions from dumping.

Applicable Standards/Limits:

A. Control of Particulate Matter

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COMAR 26.11.06.03D - Particulate Matter from Materials Handling and Construction

“A person may not cause or permit any material to be handled, transported, or stored, or a building, its appurtenances, or a road to be used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne. These reasonable precautions shall include, but not be limited to, the following when appropriate as determined by the control officer:

- (1) Use of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads, or the clearing of land.
- (2) Application of asphalt, oil, water, or suitable chemicals on dirt roads, materials stockpiles, and other surfaces, which can create airborne dusts.
- (3) Installation and use of hoods, fans, and dust collectors to enclose and vent the handling of dusty materials. Adequate containment methods shall be employed during sandblasting of buildings or other similar operations.
- (4) Covering, at all times when in motion, open-bodied vehicles transporting materials likely to create air pollution. Alternate means may be employed to achieve the same results as would covering the vehicles.
- (5) The paving of roadways and their maintenance in clean condition.
- (6) The prompt removal from paved streets of earth or other material which has been transported there by trucks or earth moving equipment or erosion by water.”

Compliance Demonstration

The Permittee shall follow the plan submitted to the Department on July 29, 1994, and subsequent amendments, for controlling fugitive emissions from interior plant roads. The Permittee shall maintain records of sweeper/water truck schedules. These records must be kept onsite and shall make them available to the Department upon request. The Permittee shall submit to the Department an updated plan annually by April 1. [Reference: Periodic Monitoring - COMAR 26.11.03.06C

Emission Units: Mobile Equipment Cont'd

STPASTTD69: Gasoline Storage Tank.

STPSUSTPG: Gasoline Dispensing Facility.

One 12,000-gallon underground storage tank for dispensing gasoline. Control equipment consists of Stage I and II vapor recovery systems.

NSPS, 40 CFR Part 60 Subpart Kb, Standards of Performance for Volatile Organic Liquid Storage Vessels (including petroleum liquid storage vessels) for which Construction, Reconstruction, or Modification commenced after July 23, 1984, is not applicable since gasoline service stations are exempted.

Applicable Standards/Limits:

COMAR 26.11.13.04C - Small Storage Tanks.

- (1) “Applicability. This section applies to a person who owns or operates:
 - (a) A gasoline storage tank that has a tank capacity greater than 2,000 gallons but less than

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- 40,000 gallons; or
- (b) A gasoline tank truck used to transfer gasoline into a storage tank that is listed in Sec. C(1)(a) of this regulation.

- (2) Stage I Vapor Recovery. An owner or operator of a gasoline tank truck or an owner or operator of a stationary storage tank subject to this regulation may not cause or permit gasoline to be loaded into a stationary tank unless the loading system is equipped with a vapor balance line that is properly installed, maintained and used."

Operational Limitations

COMAR 26.11.24.06-Training Requirements for Operation and Maintenance of Approved Systems.

- A. "General. An operator shall ensure that:
- (1) At least one employee at each facility subject to this regulation is trained in accordance with the requirements of Sec. B of this regulation; and
- (1) The trained employee assists in the training of each of the other employees at that facility who are involved in the operation or maintenance of the approved system.
- B. Approved Training Course Contents and Duration.
- (1) An approved training course shall contain, at a minimum, a discussion of the following:
- (a) Purposes and effects of Stage II vapor recovery;
- (b) Stage II vapor recovery equipment design, function, operation and maintenance;
- (c) Daily inspection requirements and development and maintenance of records and files; and
- (d) Equipment warranties and spare parts.
- (2) The approved training course shall be of a duration sufficient to properly train persons in the requirements of this chapter."

COMAR 26.11.24.08 - Instructional Signs

- A. "An operator who is subject to this chapter shall place instructional signs in conspicuous locations at each gasoline dispenser.
- B. The instructional signs shall include:
- (1) Instructions, with illustrations, on how to insert the nozzle, dispensing gasoline, and how to remove the nozzle;
- (2) A warning against attempts to continue refueling after automatic shutoff of the gasoline (that is , topping off); and
- (3) The Department's toll-free telephone number, which may be used for complaints or comments concerning the use of the Stage II vapor recovery systems."

Compliance Demonstration

COMAR 26.11.24.04 - Testing Requirements.

- A. "Except as provided in Sec. F and G of this regulation, an owner subject to this chapter shall perform leak, liquid blockage, and dynamic back pressure test on each Stage II vapor recovery system in accordance with Methods 1011 and 1012 of the Department's Technical Memorandum 91-01, "Test Methods and Equipment Specifications for Stationary Sources" (January 1991), which is incorporated by reference in COMAR 26.11.01.04C.

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- B. The leak and liquid blockage tests required in Sec. A of this regulation shall be performed on each approved system before the gasoline dispensing facility is initially used to refuel motor vehicles, or by the applicable dates in Regulation .03 of this chapter, whichever occurs later. The test method for dynamic backpressure shall be used for the liquid blockage test in accordance with Method 1012 set forth in Sec. A of this regulation.
 - C. An owner subject to this chapter shall repeat the:
 - (1) Dynamic back pressure test at least once every 12 months; and
 - (2) Leak test at least once every 5 years and upon replacement of 75 percent or more of an approved system.
 - D. An owner shall test the automatic shutoff and flow prohibiting mechanisms upon installation and at least monthly after to ensure that they operate properly.
 - E. If a gasoline dispensing facility fails any test required by this chapter, the owner shall notify the Department of the failure in writing within 5 working days after the test and before retesting.
 - F. Alternative test methods approved by CARB may be used in place of the test methods specified in Sec. A of this regulation, if the alternative test methods are approved by the U.S. EPA as a revision to the SIP, which is Maryland's plan for meeting National Ambient Air Quality Standards.
 - G. Test methods and the frequency of testing required by this regulation may be modified for vapor assist systems, if the test methods and testing frequency are approved by the Department and the EPA."

COMAR 26.11.24.05 - Inspection Requirements.

- A. "An operator subject to this chapter shall ensure that each approved system is inspected at least once each day of operation to verify that it is working properly.
- B. Except as provided in Sec. C of this regulation, the Department shall consider an operator of a gasoline dispensing facility to be in violation of Regulation .03E of this chapter during periods of time when defective equipment at the facility is placed in operation.
- C. The operator is not in violation of Regulation .03E of this chapter during any period of time that the operator establishes, to the satisfaction of the Department, that nozzles associated with defective equipment were tagged out of service and that no nozzle associated with the defective equipment was actually used.

For any defective equipment identified by the Department, the operator shall effect necessary repairs before placing the equipment in service, and shall inform the Department by telephone within 72 hours after the repair or replacement of the defective equipment has been effected."

COMAR 26.11.24.07 - Recording Keeping and Reporting Requirements.

- A. "An operator subject to this chapter shall create and maintain a record file at the facility or at an alternative site approved by the Department.
- B. The record file shall contain copies of all test reports, permits, violation notices, correspondence with the Department, equipment maintenance records, training records, and other information pertinent to the requirements of this chapter. Verification of training shall be maintained in the record file.

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Equipment maintenance records shall be maintained for at least 2 years. Test records shall be maintained for at least 5 years.

C. The equipment maintenance records shall include:

- (1) The date on which defective equipment was found, a description of each defect, a description of the corrective action and the date on which the defect was corrected, and the probable cause of the defect;
- (2) If parts are replaced, the location within the approved system of the part, the part number, and assurance that the replacement part does not degrade the efficiency of the system; and
- (3) Inspection reports and any other information relating to maintenance or care of the system.”

If any test is failed, the Permittee shall notify the Department in writing within 5 days after the test and before retesting. **[Reference: COMAR 26.11.24.04E]**

The Permittee shall submit written notification to the Department within 5 days of the incident, unless otherwise specified by the Permit. **[Reference: COMAR 26.11.24.04E]**

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COMPLIANCE SCHEDULE

ISG is not in compliance with visible emissions standards for two of their emission units. These are discussed in the individual emission units discussed above.

TITLE IV - ACID RAIN

The Acid Rain Program does not apply to ISG.

TITLE VI - OZONE DEPLETING SUBSTANCES

All mobile equipment used is managed and maintained at the ME&Y Department. There are ozone-depleting substances released to the atmosphere from the automobile and mobile equipment shops (Emissions Unit MEYSHOP) and all refrigeration operations (Emission unit MSRS) at ISG. The facility is currently complying with the applicable federal requirements in 40 CFR 82, 82.34(a); 82.42(a)(1); 82.42(b)(1),(2).

SECTION 112 (r) - ACCIDENTAL RELEASE

ISG is not subject to the requirements of Section 112 (r) of the Clean Air Act.

PERMIT SHIELD

As part of the Part 71 Permit Program, ISG formally requested a permit shield.

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INSIGNIFICANT ACTIVITIES

This section contains a list of the insignificant emissions units that were reported in the Title V permit application. The applicable Clean Air Act requirements, if any, are listed below the insignificant activity.

- (1) No. ≈12 Stationary internal combustion engines with an output less than 500 brake horsepower (373 kilowatts) and which are not used to generate electricity for sale or for peak or load shaving;

These units are subject to the following requirements:

- (A) COMAR 26.11.09.05B(2), Emissions During Idle Mode: The Permittee may not cause or permit the discharge of emissions from any engine, operating at idle, greater than 10 percent opacity.
- (B) COMAR 26.11.09.05B(3), Emissions During Operating Mode: The Permittee may not cause or permit the discharge of emissions from any engine, operating at other than idle conditions, greater than 40 percent opacity.
- (C) Exceptions:
 - (i) COMAR 26.11.09.05B(2) does not apply for a period of 2 consecutive minutes after a period of idling of 15 consecutive minutes for the purpose of clearing the exhaust system.
 - (ii) COMAR 26.11.09.05B(2) does not apply to emissions resulting directly from cold engine start-up and warm-up for the following maximum periods:
 - (a) Engines that are idled continuously when not in service: 30 minutes
 - (b) all other engines: 15 minutes.
 - (iii) COMAR 26.11.09.05B(2) & (3) do not apply while maintenance, repair or testing is being performed by qualified mechanics.

- (2) √ Space heaters utilizing direct heat transfer and used solely for comfort heat;

- (3) √ Water cooling towers and water cooling ponds unless used for evaporative cooling of water from barometric jets or barometric condensers, or used in conjunction with an installation requiring a permit to operate;

- (4) No. ≈200 Unheated VOC dispensing containers or unheated VOC rinsing containers of 60 gallons (227 liters) capacity or less;

These units are subject to COMAR 26.11.19.09D, which requires that the Permittee control emissions of volatile organic compounds (VOC) from cold degreasing operations by meeting the following requirements:

- (a) COMAR 26.11.19.09D(2)(b), which establishes that the Permittee shall not use any VOC degreasing material that exceeds a vapor pressure of 1 mm Hg at 20°C;

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- (b) COMAR 26.11.19.09D(3)(a—d), which requires that the Permittee implement good operating practices designed to minimize spills and evaporation of VOC degreasing material. These practices, which shall be established in writing and displayed such that they are clearly visible to operators, shall include covers (including water covers), lids, or other methods of minimizing evaporative losses, and reducing the time and frequency during which parts are cleaned;
- (c) COMAR 26.11.19.09D(4), which prohibits the use of any halogenated VOC for cold degreasing.

The Permittee shall maintain on site for at least five (5) years, and shall make available to the Department upon request, the following records of operating data:

- (a) Monthly records of the total VOC degreasing materials used; and
 - (b) Written descriptions of good operating practices designed to minimize spills and evaporation of VOC degreasing materials.
- (5) √ Confection cookers where the products are edible and intended for human consumption;
 - (6) √ Equipment for drilling, carving, cutting, routing, turning, sawing, planing, spindle sanding, or disc sanding of wood or wood products;
 - (7) √ Brazing, soldering, or welding equipment, and cutting torches related to manufacturing and construction activities that emit HAP metals and not directly related to plant maintenance, upkeep and repair or maintenance shop activities;
 - (8) √ Equipment for washing or drying products fabricated from metal or glass, provided that no VOC is used in the process and that no oil or solid fuel is burned;
 - (9) Containers, reservoirs, or tanks used exclusively for:
 - (a) √ Storage of butane, propane, or liquefied petroleum, or natural gas;
 - (b) No. ≈90 Storage of lubricating oils;
 - (c) No. ≈34 Storage of Numbers 1, 2, 4, 5, and 6 fuel oil and aviation jet engine fuel;
 - (d) No. 1 Storage of motor vehicle gasoline and having individual tank capacities of 2,000 gallons (7.6 cubic meters) or less;
 - (e) No. ≈10 The storage of VOC normally used as solvents, diluents, thinners, inks, colorants, paints, lacquers, enamels, varnishes, liquid resins, or other surface coatings and having individual capacities of 2,000 gallons (7.6 cubic meters) or less;
 - (10) √ Charbroilers and pit barbecues as defined in COMAR 26.11.18.01 with a total cooking

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area of 5 square feet (0.46 square meter) or less;

- (11) √ First aid and emergency medical care provided at the facility, including related activities such as sterilization and medicine preparation used in support of a manufacturing or production process;
- (12) √ Certain recreational equipment and activities, such as fireplaces, barbecue pits and cookers, fireworks displays, and kerosene fuel use;
- (13) √ Comfort air conditioning subject to requirements of Title VI of the Clean Air Act;
- (14) √ Laboratory fume hoods and vents;

For the following, attach additional pages as necessary:

- (15) any other emissions unit at the facility which is not subject to an applicable requirement of the Clean Air Act (list and describe):

No. 1 **MSCSC:** Carpentry Shop with Cyclone._____

No. 1 **MSCSSB:** Carpentry Shop Sand Blasting_____

No. 1 **MSSK:** Solvent-based Parts Cleaners._____

No. 1 **MEYSHOP:** Automobile and Mobile Equipment Maintenance Shops_____

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SECTION VI STATE-ONLY ENFORCEABLE REQUIREMENTS

The Permittee is subject to the following State-only enforceable requirements:

Facility Wide

APPLICABLE STANDARDS and LIMITATIONS

COMAR 26.11.06.08 — Nuisance

“An installation or premises may not be operated or maintained in such a manner that a nuisance or air pollution is created. Nothing in this regulation relating to the control of emissions may in any manner be constructed as authorizing or permitting the creation of, or maintenance of, nuisance or air pollution.”

COMAR 26.11.06.09 — Odors

“A person may not cause or permit the discharge into the atmosphere of gases, vapors, or odors beyond the property line in such a manner that a nuisance or air pollution is created.”

COMAR 26.11.15.05 — Control Technology Requirements

“A person who complies with the ambient impact requirement in Regulation .06 of this chapter may not be affected by the amount of the installation’s stack height that exceeds good engineering practice (GEP), or by any other dispersion technique.

- (3) Unless an existing installation is controlled using T-BACT, the degree of emission limitation required in order to demonstrate compliance with Regulation .06 of this chapter may not be affected by the amount of the installation’s stack height that exceeds good engineering practice (GEP), or by any other dispersion technique.”

COMAR 26.11.15.06 — Ambient Impact Requirement

- A. “Except as provided in §B(3) of this regulation, a person may not cause or permit the discharge of a toxic air pollutant listed in COMAR 26.11.16.07 from an existing installation or source if total allowable emissions of that TAP from the premises will unreasonably endanger human health.
- B. A person shall demonstrate compliance with §B(1) of this regulation using the procedures established in Regulation .07 of this chapter and COMAR 26.11.16.
- C. A person who owns or operates an existing premises shall meet the requirements of §B(1) and (2) of this regulation for each TAP listed in COMAR 26.11.16.07 by the applicable compliance dates listed in COMAR 26.11.16.07, or not later than 2 years after becoming subject to this chapter, whichever is later.”

Emission Unit – Sinter Strand
Operational Standard

(b) The Permittee shall operate two (2) fans per scrubber line:
any time that the Sinter production exceeds 9600 tons per day, or
when the differential pressure across either of the two scrubber throats is less than 22 inches of water gauge; [Reference MDE PTC 6-0941]

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Record keeping and Reporting

- a. The Permittee shall maintain a written log indicating if daily Sinter production was greater than or less than 9600 tons per day and the number of fans in operation each day. These records shall be kept on site for a period of five (5) years and made available to the Department upon request;
- b. The Permittee shall continuously record the differential pressure across the two-(2) venturi scrubber throats. The continuous recordings shall be kept on site for a period of twelve (12) months and made available to the Department upon request; and
- c. The Permittee shall keep on site for a period of five (5) years, all continuous differential pressure records from the venturi scrubber for all days when the differential pressure across the venturi scrubber throats is less than 22 inches water gauge.

[Reference: MDE PTC 6-0941]

Emission Unit: Coating Lines

For No. 3 Galvalume Line Roll Coater (Emission Unit CSM3GRC) only

The Permittee shall comply with the T-BACT for this operation that requires the Permittee to operate the dryer below 350 degrees centigrade (662 degrees Fahrenheit), which is the approximate temperature at which the polymers in the coating will decompose. **[Reference: MDE PTC 03-6-0948M, Part (C)(2), issued December 20, 1996]**

The Permittee shall continuously monitor the temperature of the induction dryer and shall record the temperature to show compliance with Part D(5) [T-BACT for the operation] of the permit. **[Reference: MDE PTC 03-6-1732M, Part (E)(4), issued December 20, 1996]**

Emission Units

Emission Unit PUPB1: Pennwood Boiler No. 1. Installed in 1954. (Registration number 5-0414).

Emission Unit PUPB2: Pennwood Boiler No. 2. Installed in 1957. (Registration number 5-0415).

Emission Unit PUPB3: Pennwood Boiler No. 3. Installed in 1954. (Registration number 5-0414).

Emission Unit PUPB4: Pennwood Boiler No. 3. Installed in 1957. (Registration number 5-0415).

APPLICABLE STANDARDS/LIMITS

COMAR 26.11.01.11- Additional CEM Installation Requirements

A. "Applicability and Exemptions.

- (1) The provisions of this regulation apply to a person that owns or operates any:
 - (a) Fuel-burning equipment burning coal, residual fuel oil, tars, or waste combustible fluids, and that has a rated heat input capacity of 100 million Btu per hour or greater."

COMAR 26.11.09.10 - Requirements to Burn Used Oil and Waste Combustible Fluid as Fuel.

A. General Requirements.

- (1) A person who proposes to burn used oil or waste combustible fluid in an installation shall submit the following information to the Department:

**PART 70 OPERATING PERMIT FACT SHEET
INTERNATIONAL STEEL GROUP
ISG SPARROWS POINT, LLC.
5111 NORTH POINT BOULEVARD,
SPARROWS POINT, MD 21219-1014
PART 70 PERMIT NO. 24-005-00147**

Draft
11-15-2004

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- (a) A description of, and the location of, each fuel-burning equipment or other installation in which the used oil or WCF is to be burned and the rated heat input capacity of each;
 - (b) The type and amount of fuel currently being used in each installation and the gallons of used oil or WCF expected to be burned annually;
 - (c) The maximum percentage of used oil or WCF to be burned as fuel in each installation; and
 - (d) An analysis by an independent laboratory of a representative sample of the used oil or WCF, which shall include the concentration of each of the materials listed in §B of this regulation, the PCB concentration, and the flash point.
- (2) A person may burn on-specification used oil in any installation upon submitting the information required in §A(1) of this regulation.
 - (3) A person who is burning used oil or WCF under a current approval issued by the Department may continue to burn the approved material if:
 - (a) The person registers the equipment that is burning the used oil or WCF by submitting the information required in §A(1) of this regulation; and
 - (b) The used oil or WCF is being burned in an authorized installation.
 - (4) A person who proposes to burn off-specification used oil or WCF in an installation other than a space heater, as provided in 40 CFR §279.23, is subject to the permit or registration requirements in COMAR 26.11.02.
 - (5) A person who receives a permit or registration to burn used oil or WCF shall burn only the materials authorized in the permit or registration.
 - (6) A person may burn off-specification used oil and waste combustible fluid only in those installations listed at 40 CFR §279.12(c).
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Emission Unit CRPLPST: Pickling Storage Tanks. Installed in 1999. Modified in 2000. (Registration number 6-2371M).

Emission Unit CRPLPT: Pickling Tanks. Installed in 1999. Modified in 2000. (Registration number 6-2371M).

Toxic Air Pollutants Requirement which states that the Permittee shall limit HCl emissions from the pickling scrubber to 0.46 pounds per hour, unless the Permittee can demonstrate compliance at a higher emission rate. **[Reference: Cold Reduction Mill Registration number 6-2371M]**
